AMERICAN GAS *Association* MONTHLY

SEPTEMBER 1947 • VOL. 29 · NO. 9

"New Freedom Gas Kitchen"* . . . Clean, cool and space-saving — with its fold-up seats and sliding panels in the breakfast nook. But even more important are the many ways it saves you work! Saves shopping because a new Servel Gas refrigerator stores enough food for a week. Saves dishpan drudgery because a new automatic Gas water-heater supplies enough hot water for a do-everything dishwasher. Saves cleaning — thanks to a special ventilating system that removes cooking vapors at their source. As for the greatest work-saver of *all* — just look at this new automatic Gas range! Make it the start of your "New Freedom Gas Kitchen", *today*.

10 reasons why it's America's easiest kitchen to cook in!

Here are just a few of the reasons why a new Gas range is the first thing to look for in this *or any* modern kitchen:

1. It's Automatic — Gas turns on and off by clock control. Cooks a complete oven meal when you're not even home!

2. It's Faster — high-boil heat available in a *second!*

3. It's Flexible — not 5, not 7, but *hundreds* of top-burner heats!

4. It Bakes Better — ventilated oven browns "just right" all over!

5. It's Cleaner — burners are non-clog. Pan bottoms won't smudge!

6. It's Cooler — no long-lingering top-burner heat. Extra insulated *all over!*

7. It Really Broils — only the flame seals-in juicy-rich flavor!

8. It's Exact — oven thermostat holds any heat from 250° to 550°!

9. It's Economical — costs less to buy and operate than any other new automatic range!

10. It's "CP" — Look for this seal. It's your buying guide to the best modern features in any Gas range!

GAS

The Wonder Flame that Cools as well as Heats

Clip this out . . . and send with your name, address and 10¢ in coin or stamps for your copy of complete kitchen planning booklet "New Freedom Gas Kitchens."

AMERICAN GAS ASSOCIATION
Dept. G, 420 Lexington Ave., N.Y. 17, N.Y.

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According to Dr. Wilfred Funk, lexicographer and dictionary publisher, the most bitter word in the English language is "alone." We suggest on the other hand that the sweetest word is "together". . . . The million dollar "Gas Has Got It" advertising campaign which opens late this month is an unexcelled opportunity for the Association, gas utilities, gas range manufacturers and dealers to prove the value of that word "together." Only by means of the closest industry-wide co-operation and tie-in with this campaign will the American public be educated to the advantages of gas cooking. . . . Therefore, pull together now—come together in Cleveland October 6. . . . From Chicago comes word of another example of close harmony. Fledgling gas men from the Institute of Gas Technology have been actively engaged in summer employment-training in the gas industry—news which is particularly encouraging at a time when many industries are in dire need of competent apprentice material. . . . Dr. Funk states that the saddest word in the English language is "forgotten." You, Mr. Gas Man, can insure that the advantages of modern gas service will not be forgotten. Pull together now and tell the world that "Gas Has Got It!"

JAMES M. BEAL
EDITOR

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Convention Preview

THE eyes of the gas industry will be focused on Cleveland next month when several thousand of the industry's key members attend the twenty-ninth annual convention of the American Gas Association. Meeting at the Cleveland Auditorium, October 6-8, delegates will hear outstanding speakers from within and from outside the industry review the latest developments and set the course for the next year.

Theme of the convention will be "Gas Has Got It," thus tying in with the greatest national co-ordinated promotional program in the industry's history which will be in full progress at the time of the convention. While a bedrock discussion of many foremost operating problems will be scheduled, special attention will be directed to the accelerated research and promotional program which has been making headline news the past few months.

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Three morning general sessions, a home service breakfast, and afternoon meetings of the departments and sections will include many stellar attractions. Problems of broad managerial interest will be covered at the general sessions while detailed operating problems will be handled at the sectional meetings.

The convention arrangements committee, under the able leadership of J French Robinson, president, The East Ohio Gas Co., Cleveland, and a past-president of the Association, has announced some of the highlights of a strong general sessions program designed to appeal to every segment of the industry.

R. H. Hargrove, president of the American Gas Association, and recently elected president of the Texas Eastern Transmission Corp., which operates the Big and Little Inch pipelines, will preside and deliver the presidential address at the opening session. He is expected to take stock of the industry's assets and accomplishments and focus attention upon the most important features of the Association's co-ordinated national program.

Following an official welcome to Cleveland by Mayor Thomas A. Burke, the convention will get down to business with an address of compelling timeliness and significance. C. M. White, president, Republic Steel Corp., Cleveland, will discuss the crux of one of the nation's foremost production problems—the supply of steel and its allocation. He will direct his remarks to the specific requirements of the gas industry.

This initial session will also include a report of A. G. A. Managing Director H. Carl Wolf; an accounting of the Association's financial position by Treasurer Edward F. Barrett, president, Long Island Lighting Co.; and the election of officers for the next year.

Tuesday has been set aside as R. W. Gallagher Day, in honor of Mr. Gallagher, past-chairman of the board of the Standard Oil Co. of N. J., who has played a prominent part in the gas industry's progress over a period of years. He is an A. G. A. past-president and was the first chairman of the Laboratories' Managing Committee.

The woman's viewpoint will be injected as the second general session gets under way Tuesday morning. Tentative plans call for a top-flight feminine speaker to brief the predominantly male audience on the foibles and problems of America's Number One customer.

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Another speaker will delve into the nature of stockholders' reports and point out the lessons revealed in a nationwide survey of this vital management medium.

Nelson E. Smith, chairman, Federal Power Commission, will address the convention on the problem of natural gas industry regulation. Coming on the heels of the nationwide investigation and the uncertain direction of governmental control, his remarks are expected to be highly significant.

Another government representative, Max W. Ball, director, Oil and Gas Division, Department of the Interior, Washington, D. C., is slated to *(Continued on page 419)*

• Opposite: Cutting samples of 30-inch pipe which underwent extensive laboratory tests prior to installation in the Southern California gas companies' Blythe-Los Angeles pipeline. Photograph is by Mel Jones of Southern California Gas Company.

Telling Mrs. America That . . .

1. Best automatic features
2. More modern conveniences
3. Easy to keep clean
4. Easiest to cook with
5. Cooks foods better
6. Cooks things quicker
7. Cool in operation
8. Costs less to run

The new automatic gas range has all nine points women want most for superior cooking performance

GAS HAS GOT IT!

THE hard-hitting slogan, "Gas Has Got It," will be drummed into the general consciousness of every individual in the country this fall when the gas industry unleashes the greatest coordinated promotional drive in its history. Virtually every means of communication, nearly every medium of expression known to the business world will be used to convey to the American people the fact that gas cooking provides to a greater degree than any other kind, those features which the housewife desires most. Maximum attention will be paid to the automatic gas range built to "CP" standards.

Basis for the campaign will be the results of a nationwide survey of public opinion conducted by the Elmo Roper organization under the direction of the American Gas Association. This survey established nine points on which women base their choices of cooking equipment. In order of importance they are: (1) best automatic features; (2) more modern conveniences; (3) easy to keep clean; (4) easiest to cook with; (5) cooks food better; (6) cooks things quicker; (7) cool in operation; (8) costs less to run; (9) costs less to buy new. These nine points will be the focal point of *(Continued on page 382)*

YOUR BEST BUY IS A...
lights without matches
heats without smoking
even cooks a meal while you're out of the house!
new
AUTOMATIC GAS RANGE
Only a new GAS range gives you all these cooking advantages
INSIDE and OUT
10 ways easier for top-of-stove cooking
10 ways better for baking and broiling
you'll do the fastest cleanest easiest cooking in your life on the new GAS range!
what you want... the new gas ranges have!
GAS now first for modern automatic cooking
9. Costs less to buy new
want a new range that's faster, cleaner... easier to cook with... fully automatic?
GAS has got it!
automatic controls... smokeless broiling... easier faster cleaner cooking!
you get everything in the amazing new GAS ranges!
6 questions to ask yourself before you buy a new range
1. 2. 3. 4. 5. 6.
AMERICAN GAS ASSOCIATION
GAS

Samples taken from A. G. A. national ad series showing actual available gas range models identified by brand name

D. W. Reeves

R. G. Barnett

W. L. Hayes

C. S. Stackpole

H. D. Valentine

O. R. Doerr

ELEVEN regional meetings throughout the country have been scheduled to broaden the impact of the "Gas Has Got It" drive by supplying full information to help gas companies start local campaigns in support of the national effort.

The initial meeting was held August 20 at the Old Heidelberg Hotel, Jackson, Mississippi. D. W. Reeves, Oklahoma Natural Gas Co., Tulsa, was chairman. The general schedule for this and subsequent meetings calls for a gas company executive to discuss the results of the Elmo Roper Survey, and participation by designated advertising, publicity, promotion, and manufacturer representatives.

The schedule of the other meetings is as follows:

September 2—Portland (Oregon) Gas & Coke Co. auditorium; R. G. Barnett, chairman.

September 2—Nicollet Hotel, Minneapolis; W. L. Hayes, Montana-Dakota Utilities Co., chairman.

September 3—Hotel Biltmore, New York City; C. S. Stackpole, Consolidated Gas, Electric Light & Power Co. of Baltimore, chairman.

September 4—Congress Hotel, Chicago; H. D. Valentine, The Peoples Gas Light & Coke Co., chairman.

September 5—auditorium of Pacific Gas & Electric Co., San Francisco; O. R. Doerr, Pacific Gas & Electric Co., chairman.

September 8—Adolphus Hotel, Dallas, Texas; J. R. Guidroz, New Orleans Public Service Inc., chairman.

September 8—Muehlbach Hotel, Kansas City, Missouri; George D. Wells, The Gas Service Co., Topeka, Kansas, chairman.

September 8—Southern California Gas Co. auditorium, Los Angeles; F. M. Banks, chairman.

September 10—Henry Grady Hotel, Atlanta, Ga.; J. W. Lea, Atlanta Gas Light Co., chairman.

September 11—Bradford Hotel, Boston; J. A. Hiller, Portland Gas Light Co., Portland, Me., chairman.

REGIONAL MEETINGS CHAIRMEN

J. R. Guidroz

G. D. Wells

F. M. Banks

J. W. Lea

J. A. Hiller

GAS HAS GOT IT!

(Continued from page 380)

the gas industry's unprecedented drive promoting automatic gas ranges built to "CP" standards.

The imperative need to change negative thinking into positive acceptance of automatic gas ranges was emphasized when the survey revealed that women are woefully ignorant of most features of modern automatic gas ranges. Despite the fact that ranges of "CP" quality have been available for more than a decade, the survey showed that 68 percent of the women in the United States either do not know about the automatic and other features of these ranges or believe that competitive equipment has many of these features to a greater degree. Half of these women have gas

Gas has got it 9 ways!
A MILLION DOLLAR ADVERTISING DRIVE THIS FALL TELLS THE WORLD ABOUT IT!
new automatic gas ranges
Automatic Gas Ranges
CP
1. Best Automatic Features
2. More Modern Conveniences
3. Easy to Keep Clean
4. Easiest to Cook With
5. Cooks Foods Better
6. Cooks Things Quicker
7. Cool in Operation
8. Costs Less to Run
9. Costs Less to Buy Now

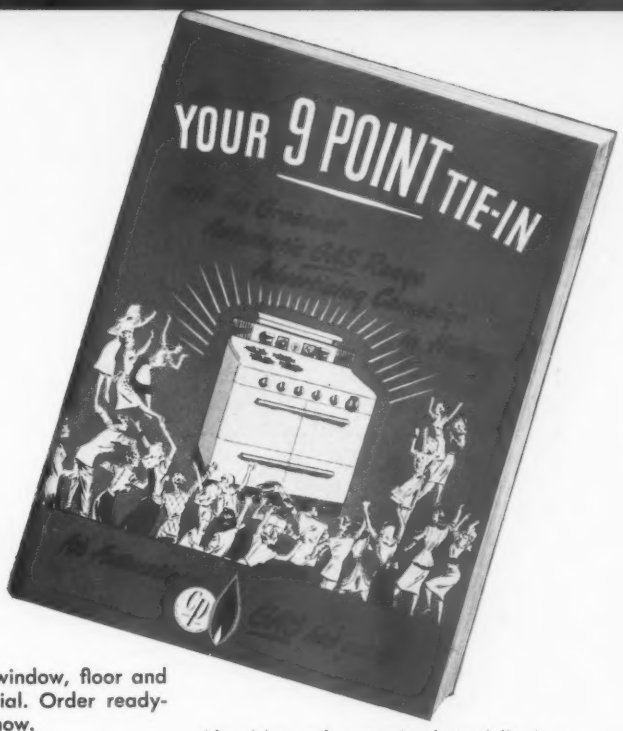
One of a series of four advertisements being run in seven leading trade publications by the Gas Appliance Manufacturers Association to acquaint appliance dealers with the profit possibilities of featuring automatic gas ranges built to "CP" standards

ranges ten years old and one-quarter have ranges more than 15 years old.

These conditions convinced the industry that drastic action was needed. The result is the "Gas Has Got It" campaign —designed to replace opinions and fancies with facts. Concentrating a tremendous volume of advertising and promotional material in a comparatively short period, the drive will employ "shock" tactics to re-educate public opinion.

Spearhead of the campaign will be the A. G. A. national program which will concentrate 98 million advertising messages in ten national magazines—three insertions each from late September through December. This compares with 40 million messages utilized in the same period of 1946. Magazines selected to do this job are: *Saturday Evening Post, Life, Collier's, Ladies' Home Journal, Good Housekeeping, McCall's, Woman's Home Companion, Better Homes & Gardens, American Home* and *Parents' Magazine.*

To achieve the full impact of national co-ordination, this advertising will be augmented by an increasing volume of national and regional advertising by "CP" range manufacturers and will be expanded at the point-of-sale by gas companies, distributors and dealers in their local advertising and promotional activities.



Advertising and promotional portfolio is a work kit with complete tie-in materials

1 Set up a live floor demonstration—show that the automatic gas range has what women want.

2 Use all available window, floor and outside display material. Order ready-made display pieces now.

3 Arrange showings of full-color film, "Winning Seals of Approval," to demonstrate the Nine Points.

4 See that every homemaker gets "Food is Fun," new A. G. A. booklet on automatic cooking with gas.

5 Intensify consumer education with home service schools, demonstrations, home calls and special classes.

6 Use teacher's manual, "Automatic Gas Cookery," to help reach the moulders of young America's thinking.

7 Tie-in your New Freedom Gas Kitchen program as a background for the presentation of automatic gas cooking.

8 Devise both short and long-range programs for training company and dealer salesmen to sell automatic gas ranges.

9 Make full use of envelope stuffers, inserts and pick-up pieces. Write your range manufacturer for material today.

Dealer display is silk-screened on heavy cardboard, is equipped with plastic-metal holder

Polaroid animated display effectively tells sales story with brilliant changing colors

...e service tie-in ...means of inten... ...d consumer education

Teacher's manual, "Automatic Gas Cookery"

Full-color film, "Winning Seals of Approval"

New booklet on automatic cooking with gas

Heralded as a million dollar promotional effort, the drive calls for an expenditure in three months of $200,000 from the A. G. A. advertising fund, upwards of $600,000 by the utilities and dealers in local advertising, and the remainder by individual "CP" range manufacturers. All types of tie-in material will be employed to support the venture.

Timing of the campaign is particularly important. Tuesday, September 2, will bring the mailing of a complete advertising and promotional portfolio to the entire industry. From that date on, manufacturers and the Association will service gas companies and dealers with special tie-in material. September 22 will witness the appearance of the first national advertisement.

Local companies and their sales staffs will get firsthand information on the complete campaign at a series of eleven regional meetings which will be held throughout the country starting August 20 in Jackson, Miss., and ending September 11 in Boston. Key industry speakers will outline elements in the comprehensive promotional plan and supporting tie-in materials will be displayed.

Complete working kits have been designed with suggestions for all types of advertising and promotional tie-ins. Among the many supporting tools available are newspaper mats, photo-prints of original artwork for reproduction in local advertisements, window display pieces, banners and streamers, range display pieces, counter displays, outdoor posters, car cards, blow-ups of national ads, envelope stuffers and pick-up pieces, radio commercials, and special publicity stories on all automatic gas range features.

The A. G. A. full color, sound motion picture, "Winning Seals of Approval," will play an important part in the campaign. There will also be available a consumer range booklet, "Food is Fun," home service tie-ins and a new booklet, "Home Service Spotlights the Automatic Gas Range," New Freedom Gas Kitchen promotions, "CP" range sales tags, sales training helps, and a range manual on "Automatic Gas Cooking" designed for home economics teachers. These and other promotional media will be utilized to the fullest extent to help drive home the story of automatic gas cookery.

First of four G.A.M.A. ads appearing in selected trade publications beginning with September issues. Entire series will send more than one-half million messages to range dealers. A second series will appear in two leading home economics magazines

Each advertisement in the A. G. A. national series will feature directly the virtues of current model automatic gas ranges of "CP" quality or better. Each ad will take up some angle of the theme, "The New Gas Ranges Are Really NEW." The art and copy platform will revolve around the nine guiding points women use in selecting a new range.

In addition to the $200,000 fall campaign, the Association will spend $600,000 for 27 or more full-page insertions, or 90 million messages, in national magazines in 1948. This national consumer advertising, tentatively planned for January-September 1948, will continue to highlight the automatic gas range and will place strong emphasis upon the superiority of gas for cooking.

A feature of the Association's latest campaign is a unique arrangement with the "CP" range manufacturers whereby actual available range models identified by brand name will appear in the ads. For manufacturers who advertise nationally, the Association will offer 50 cents of its own advertising space for each dollar spent by the manufacturer, provided his national advertising expenditures exceed $50,000. A ceiling of $150,000 worth of Association space will apply to any one manufacturer.

For range manufacturers who do not advertise nationally but whose appropriation for local or regional advertising includes a minimum of $25,000, the Association will contribute 25 cents of its advertising for every dollar the manufacturer spends. Manufacturers who participate in the campaign will have A. G. A. ads assigned to them throughout the entire 12-months campaign and not merely during the fall series alone. This arrangement is expected to result in a greatly increased volume of advertising by participating manufacturers.

The campaign is ideal for tie-in by gas companies at the local level and provides a ready-made opportunity for the entire gas industry to unite on one theme for a definite period of time. Every national advertisement is easily adaptable for local use with possible minor changes. All gas utilities are urged to run a full schedule of newspaper and other advertising to support and localize the campaign.

No previous campaign during the eleven years of A. G. A. national advertising has created such enthusiasm throughout the industry as this coming all-out drive for modern, automatic gas ranges built to "CP" standards. All indications are that the gas industry will witness in 1948 greater public acceptance and appreciation of automatic gas ranges than ever before—greater gains over competition's "second-best" for cooking in American homes.

The battle cry is: Cooperate and Collect! Participate and Profit, because GAS HAS GOT IT!

Certifying Certification Programs

American Standards Association develops categorical statement of general principles that should underlie any certification program the public regards as valid

BY BERNARD L. OSER

Chairman, ASA Sectional Committee on Principles Underlying Valid Certification and Labeling of Commodities Z34

THE ultimate consumer—the entire 130 million of us, including the small retail and industrial purchasers—have been buying goods and services all these years without benefit of any practicable way of rating the reliability of claims made by sellers. Even if advertising statements and label descriptions could be taken at face value, their adequacy as informative data is limited because the significance and comparative use-value of the qualities publicized are not usually stated.

To give the ultimate consumer honest, reliable sincere and significant descriptions of their products, some manufacturers have employed recognized laboratories to certify the validity of claims made in labeling and advertising.

A survey made by the American Standards Association in 1932 revealed that certification activities of some type were already being carried on by at least 60 national organizations. These included the Lumber Manufacturers' grading program, Underwriter's Laboratories label, American Gas Association's A. G. A. Seal of Approval, and the grade names of the California and Florida fruit growers' association.

Some organizations, notably the American Gas Association, based their tests on national standards prepared through a procedure that assured all groups concerned a voice in the development of the standards. In such cases, the standards on which the approvals were based were identified by the organization and copies could easily be obtained by the general public.

To give business and the public alike some means of recognizing valid certification representations, the Association of Consulting Chemists and Chemical Engineers asked the American Standards Association to set up a procedure for "certifying the certification."

So logical was this request and the work so badly needed that after an unusually penetrating investigation under ASA auspices practically all interests among producers, distributors, and users reached the conclusion that a standard on certification procedures should be developed.

In April 1947 the final standard, including changes based on the comments and criticisms received as the result of an unusually wide circulation of the document for comment and criticism, was approved as an American Standard.

This American Standard Practice for Certification Procedures is in the nature of a categorical statement of the general principles that should underlie a certification program that the public may regard as valid.

The standard covers a wide field. It is based mainly on the principle that every step leading to the certification of a product must be openly arrived at. Any organizations carrying out the functions of certification—whether they sponsor the certification, prepare the standard on which the certification is based, draw the samples for checking the claims of the manufacturer, carry out the tests to determine conformity with the standard, or defray the costs of the program—must under this procedure make public their qualifications and their responsibilities.

In order to qualify, the standards used must be nationally recognized in themselves or must have been developed by a "qualified trade association, agency,

(Continued on page 420)

Well-known, authoritative certification labels perform a valuable service for the public

Extracts from article appearing in *Industrial Standardization*, July 1947.

Dramatizing Home Service

Popular "Circus Kitchen" exemplifies colorful progress attained by Cincinnati utility's home service department

Modern gas kitchen occupies prominent spot in "Circus" in sales floor lobby

All available makes of gas ranges and water heaters loaned by dealers were displayed at Cincinnati "Circus Kitchen"

Mary Belle Burnett

BECAUSE of its outstanding record and such unique activities as the "Circus Kitchen" described in this article, the Cincinnati Home Service Division has attracted unusual national attention. It is particularly appropriate this year to review the high spots of the division's record since its director, Mrs. Mary Belle Burnett, is the 1946-1947 chairman of the American Gas Association Home Service Committee. As sparkplug of the national program she acted as chairman of the conspicuously successful Home Service Workshop in Cincinnati last January and played a large part in bringing the committee's work to a successful conclusion. Mrs. Burnett has completed 17 years with the Cincinnati Home Service Division, the past 11 as director. She is a graduate of Carnegie Institute of Technology.

WITH a record as one of the oldest organizations of its type in the nation, the Home Service Department of the Cincinnati Gas & Electric Co. has a colorful history behind it dating back to the early 1900's when gas was that "magic flame" just coming into its own as a fuel for cooking.

In the early 1900's the company, then known by another name, began to promote the sale of gas stoves which could be purchased for $8.75. Since the use of gas and gas stoves for the preparation of food was virtually unknown to thousands of housewives at that time the company employed a young lady to give demonstrations. Thus it was in 1905 that the home service department, though not called by that name, came into being.

In 1910 this project was discontinued only to be re-organized in 1919. Promoting sales by demonstration and education was continued from this time until 1923 when it was again abandoned.

Three years later the Gas Commercial Department was re-organized under the direction of Edwin R. Rothert who is now a vice-president of the company in charge of gas sales and manager of this department. Mr. Rothert re-established a Home Service Department by employing one person to conduct sales promotion cooking schools and to teach customers the proper use of the new gas ranges equipped with heat controls. Insulated ovens were being introduced at that time. In fact most ranges could be bought with or without insulation or heat controls. Home service work at Cincinnati Gas & Electric has continued to date as a part of the work of the Gas Commercial Department.

The department expanded gradually along with the utility business from one girl into an organization consisting of 11 home economists, a secretary, and two kitchen assistants. There are now branch offices in Middletown, O., Loveland, O., and Covington, Ky., with a home economist in each office.

During World War II there was no decrease in the size of the Home Service Department, although the utility discontinued merchandising early in 1942. Home service activities changed with

White satin horse carrying bare-back rider and sign about gas refrigeration rotates in center ring of "Circus Kitchen" window. Mechanical figures representing gas cooking and water heating perform on either side

Margaret Robinson explains kitchen features to a customer by use of miniatures in "side-show" corner of lobby

Dorothy Overbeck explains modern gas range to University of Cincinnati students doing laboratory work at the utility

the times from sales promotion to nutrition and canteen classes, back to promoting sales today.

Immediately following the war a series of classes were started in an effort to teach the business girl how to cook for the returning G.I. boy friend. More than 1,000 girls attended five series of evening classes. These were followed by a daytime series for brides which also proved very popular.

Women employees of the company are taught to cook in small groups following working hours in the Department's test kitchen. The groups meet once a week for a ten-week period.

For many years the home service director, Mary Belle Burnett, has been a contributing editor to the *Cincinnati Times-Star's* weekly foods column. This column, with its accompanying photographs, has proved a popular feature of the newspaper. Members of the home service staff usually select the subject and prepare the food for the photographs.

This staff consists of home economics graduates from the University of Cincinnati, Miami University, University of Kentucky, Ohio State University and Iowa State University. The entire staff participates in a nine-day annual cooking school at the Cincinnati Zoo in August which is sponsored by the *Cincinnati Times-Star* and the Cincinnati Retail Grocers and Meat Dealers Association.

Home management students from the Home Economics Department of the University of Cincinnati come to the utility building for laboratory work in equipment for which they receive college credit.

A plan whereby gas ranges will be sold to schools for use in home economics classes has recently been inaugurated and each will be demonstrated by a home service advisor.

One of the most recent undertakings was in cooperation with the display, advertising and dealers cooperative departments. On June 16 the "Circus Kitchen" was opened on the sales floor with open house for company executives, press and radio representatives. A few days later all the home economics teachers in the Greater Cincinnati area were invited to view the exhibit. On each occasion pink lemonade was served along with animal cookies, peanuts and popcorn. The over-all display was supervised by E. H. Hodgetts, assistant manager, Publicity Department.

Margaret Robinson, a member of the Home Service Department who has been trained in kitchen planning, directed the arrangement of the kitchen equipment and selected all the accessories which were loaned to the utility. The background was a circus-figured wall paper of deep pink and blue coloring. On the two-foot by seven foot window sills stood white pots with artificial red geraniums which were so realistic that many visitors wanted to buy them.

Home service girls wore pink and blue pinafores trimmed with white rick-rack over white blouses. They baked animal cookies and each afternoon served "gas cold" pink lemonade to visitors.

As a "side-show" a corner of the lobby was devoted to a display of kitchen ideas and arranged as a spot where interested persons could browse.

The display windows were in keeping with the circus idea. An attractive white satin horse which rotated in a ring bore a bare-back rider and a sign about gas refrigeration. He was directed by a mechanical ring master. Other mechanical figures represented gas cooking and water heating. Gas house heating was in a cage in a smaller window and bore a sign reading: "Hope to be in the show next year." (Due to the shortage of gas it is not being actively promoted now.)

Around the kitchen in the center of the lobby were placed all available makes of gas ranges and water heaters loaned by dealers. This part of the exhibit was arranged by R. J. Paulsen, director of co-operative dealer activities.

All in all, the "circus" attracted much favorable comment from visitors and was a concrete example of the progress which the utility and its Home Service Department have made over the years.

"Hot Water Helps"

Portland Gas & Coke Company's new 14-minute sound-slide film now available for general use by gas utility industry

A POWERFUL sales tool for the promotion of automatic gas water heating is now available to utility home service, residential and sales promotion divisions in "Hot Water Helps," produced by the Portland (Ore.) Gas & Coke Company.

The utility is offering to share the 14-minute sound-slide film with the gas industry at approximate cost—$35 for a print and recording, according to Fred M. Kimball, promotion manager. The price includes the purchasing utility's name on the first frame and the opening words in the recording, "Your Gas Company Presents . . . ."

Original cost of the production was approximately $2,000 according to Mr. Kimball, under whose direction the McCann-Erickson advertising agency prepared the script and continuity.

Photography was by Photo Art Commercial Studios, a Portland concern with a reputation for quality photography. The setting was the Portland utility's ultra-modern "Hospitality House."

The film's "premiere" was a feature of the American Gas Association's and Pacific Coast Gas Association's Home Service Workshop on Mt. Hood, Ore., April 1-2. Advance showings have been held in New York and San Francisco where the production was enthusiastically received by personnel of both associations, each of which has a print in its offices.

Developed primarily for use by home service girls before women's groups, at the suggestion of Rita Calhoun, home service director, the film has been found useful in numerous other ways. Because the continuity contains information which tends to make those who view the film "hot water experts," it is especially valuable in sales training work for company or dealer.

The film has four basic aims:

To include purely educational material, so that an audience would not leave with the feeling of having received only a sales talk. One example is enlightening, up-to-date laundry information on the advantages of a short soak in hot suds, as against the long-accepted belief that hot water sets dirt. Correct bath-water temperatures also are stressed.

To promote additional use of hot water even by those already having automatic water heating, and with no attempt in doing so to avoid embarrassing slow-recovery, competitive services. An example of stimulating hot water usage, and thereby revenues, is the tip that using tempered water when washing vegetables will keep the hands from getting "miserable and blue."

To sell automatic gas water heating even to the point of including gas-fired tank water heaters as competition. Even the old wood stove with water-back is not forgotten. Portland is a highly competitive area and no punches are pulled.

Finally, to promote automatic gas-fired clothes dryers as a powerful ally to the automatic gas water heater in keeping the domestic load well-balanced in favor of gas.

Included among the production's 54 frames are 16 cartoons which inject bits of humor to help put over points. Diagrams and cut-away photographs bring out some of the fundamentals of the automatic gas water heater and thereby explain its inherent superiority over other services.

Complete details, including a copy of the entire script, may be obtained from Fred M. Kimball, promotion manager, Portland Gas & Coke Co., Public Service Bldg., Portland 4, Oregon.

It's not a fish story which Mrs. Grayson is telling her hostess, Mrs. Reade, but a description of her own water heater. "It's big and white, but certainly doesn't supply hot water that fast!" she exclaims, pointing to Mrs. Reade's gas-fired water heater

Dehydration Of Water Gas Tars

Summary of extraction tests with pentane and effect of elevated temperatures on viscosity of tar and tar emulsions

TESTS have shown that upon extraction of water gas tars with normal pentane, from one-fourth to one-half of the oils present boiling below 360° C are not extracted. To avoid this loss in available oils, "flash" distillations of the tar emulsion directly seem desirable. One such distillation at 3 mm. Hg. pressure produced 170 percent more oils normally boiling below 315° C than were produced by n-pentane extraction followed by distillation at atmospheric pressure.

The testing of solvents for selectivity in the extraction of resin-forming compounds was continued. Sulfolane, isopropyl alcohol, ethyl tartrate and monoacetin all showed some selectivity, but none were as good as diethylene glycol, either qualitatively or quantitatively. In order to speed up the analysis of styrene-ethylbenzene mixtures, a curve was made of refractive index at 20° C versus composition. It was found that diethylene glycol can be removed quantitatively by washing with a volume of water equal to or greater than four times the volume of glycol present. Equilibrium diagrams for the system styrene-ethyl benzene-diethylene glycol at 25° C and 35° C were determined. The effect of temperature was slight, causing a small decrease in the relative selectivity coefficient (beta). The production of an extract containing 90 percent styrene and a raffinate containing ten percent styrene on the solvent-free basis requires about 12 theoretical extraction stages. Preliminary tests are being made on a simple extraction column with discontinuous flow. Slightly more than one theoretical stage has resulted, and further tests are being made on the type of packing needed, rate of flow, etc.

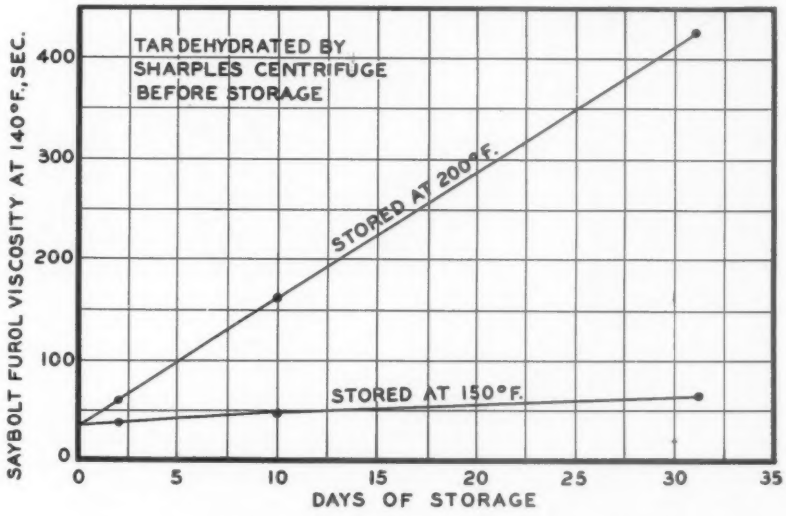
Further tests on the use of isopropyl alcohol for dehydration have shown that the refinements necessary to produce quantitative results as a laboratory test are too involved to warrant use. The application of isopropyl alcohol in commercial scale dehydration may become a useful process where it is important to avoid heating the tar.

Dehydrated tars stored at 150° F and 200° F have shown a linear increase in viscosity with length of storage. The increase in viscosity for the one stored at 150° F was 74 percent and for the one stored at 200° F, 1,060 percent. The effect of storage of the tar emulsion was difficult to analyze probably because of variations induced in the tar when dehydrated by A.S.T.M. D370-33 method before running the viscosity. Apparently the effect of storage of the emulsion at 150° F was very slight, but storage at 200° F produced an increase in viscosity of the tar nearly as high as for the dehydrated tar.

A new series of tars have been received from The Philadelphia Gas Works including a sample from the "flash" distillation unit. This material was found to contain 3.8 percent crude naphthalene and to produce 30 percent resin. Tests will be made to determine the compounds present and the physical properties of these compounds for use in analyzing other distillates from water gas tars.

Tar Storage at Elevated Temperatures

Although the effect of storing water gas tar at elevated temperatures on viscosity is well-known to men in the field, it was felt by the committee that quantitative results showing this effect were not as generally available as they should be. Consequently, a series of tests has been started to establish that an increase in viscosity of water gas tars occurs on hot storage. Two samples of the same batch of tar emulsion (B-10) containing 32.1 and 32.7 percent water were stored at 150° F and 200° F respectively in an oven. Likewise, two samples of the same batch of dehydrated tar from a Sharples centrifuge (B-11) were stored at 150° F and 200° F. Saybolt Furol viscosities were determined at 140° F giving the following results for the dehydrated samples (B-11):



Change in viscosity of dehydrated tar stored at elevated temperatures

TAR STORED AT 150° F

Days Storage	*Viscosity SFS*	*Percent Increase In Viscosity*
0	36.7	0
2	39.2	7
10	48.2	31
31	63.9	74

Excerpts from Progress Report No. 5 (Project M-33) at Pennsylvania State College to the Gas Production Research Committee, A. G. A. Manufactured Gas Department.

TAR STORED AT 200° F

Days Storage	Viscosity SFS	Percent Increase In Viscosity
0	36.7	0
2	62.3	70
10	159.4	334
31	425	1,060

These values are plotted on the accompanying graph. It can be seen that the increase in viscosity is a linear relationship, at least for the first month plotted here. The viscosities will be run again after three months' and six months' storage.

The tar emulsions (B-10) were dehydrated by A.S.T.M. Method D370-33 and the viscosity determined. After a month of storage, the emulsion was shaken, a sample dehydrated (A.S.T.M. D370-33) and the viscosity determined. The results for these samples are listed below:

TAR STORED AT 200° F

Days Storage	Viscosity SFS	Percent Increase In Viscosity
0	302	0
31	315	4

TAR STORED AT 200° F

Days Storage	Viscosity SFS	Percent Increase In Viscosity
0	245	0
31	2,520	930

It should be noted that the process of dehydrating the tar emulsions apparently introduces considerable variation into the viscosity of the resulting tar. In addition to the variation caused by different amounts and intensities of heat applied during the dehydration, the tar is very difficult to mix thoroughly afterwards. The first tar (stored at 150° F) gave viscosities of 312 and 330 SFS for one dehydration, and 301 and 303 SFS for a check dehydration. Since tar from the first dehydration apparently was not properly mixed, the value from the second dehydration (302) was taken as correct. The second tar (stored at 200° F), which should be the same as the first tar, gave viscosities of 255 and 259 SFS for one dehydration and 229 and 241 SFS for a second dehydration. The average value of 245 SFS was taken as a basis for this tar. The same sort of variation occurred in the viscosities of the tar stored at 150° F run after one month storage. The first dehydration gave an average of 315 seconds and the second dehydration 456 seconds. The higher value was assumed to be incorrect due to excessive heating in the dehydration. Since the viscosity after storage at 200° F was so high, no check run was made. The accuracy of measurement of viscosities after A.S.T.M. dehydration is obviously not very good, and the results should be taken only as an approximation.

It is evident, however, from these data that the increase in viscosity at 150° F is much less if the tar is stored as an emulsion than if it is stored in the dehydrated form. However for the tar stored at 200° F the increase in viscosity is approximately the same for both the tar emulsion and the dehydrated tar. These tars will also be tested after three months' and six months' storage.

Houston Natural Sponsors School Appliance Replacement Plan

Houston Natural replacement plan has put modern gas appliances in school laboratories

A TIMELY program of the Houston Natural Gas Corp. to place modern gas appliances in home economics departments of schools on the utility's lines has resulted in the installation of 154 "CP" gas ranges and 30 gas refrigerators.*

The current program was launched late in 1946 when the sales promotion department and the residential and commercial sales department began cooperative efforts to obtain special allotments of appliances from manufacturers in order to carry out, in conjunction with dealers and schools, a plan which would benefit all concerned. Basically, provision is made whereby gas cooking and refrigeration units in the schools will be replaced every two years, at no cost to the schools, with current models just off the production lines.

Houston Natural has cooperated actively with schools on its lines for years by assisting them, through local dealers, to obtain the best possible equipment for their facilities with particular reference to installation of modern gas appliances in home economics departments. The present program started last October and has made available to more than 3,250 home economics students in 60 schools throughout the company system the advantages of modern gas cookery as found in the new "CP" ranges, as well as the benefits of modern food preservation as offered by the new gas refrigerator.

* Totals compiled as of August 13.

Advantages of modern gas cookery have been made available to more than 60 schools

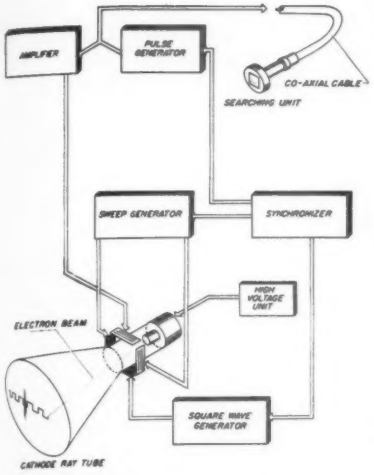


Fig. 1. Block Diagram of the Supersonic Reflectoscope

Locating Internal Defects

Supersonic Reflectoscope gains acceptance as non-destructive tester for flaws hidden as deep as 25 feet in plant equipment

BY BENSON CARLIN

Product Engineer, Sperry Products, Inc., Hoboken, N. J.

THE non-destructive testing of plant equipment and machinery has been a problem to engineers for a number of years. A number of solutions of this problem have been presented and within the last few years supersonic testing has become recognized as an outstanding addition to the past knowledge in the field. Equipment may be tested in this manner without damage to any part and very often without any disassembly. When metals are tested supersonically the depth of penetration may be as great as 25 feet and there is essentially no lower limit to the size of flaws which may be found.

The term "supersonics" or "ultrasonics" is used to refer to those frequencies of vibrational waves which are above the range of normal hearing. Various investigators have claimed to generate such supersonic vibrations in the order of 5 x 10^8 cycles. However, for the testing of materials, frequencies between 0.5 MC and 5 MC are usually used. These vibrations may be of several types, but those in which we are interested here have a particle motion parallel to the direction in which the waves are travelling and are called longitudinal or L waves. These consist of a progressive rarefaction and condensation travelling through the material and may be sent through most solids, liquids or gases.

Supersonic vibrations because of their high frequency travel in straight lines. The propagation is therefore referred to as rectilinear. The energy does not fan out but remains like the focused beam of a searchlight. These waves are very highly reflected from any change in homogeneity of the material, such as a difference in elasticity or density, and are easily produced and detected by electronic means. These wave characteristics make supersonics ideal for testing materials.

The Supersonic Reflectoscope utilizes these vibrations by generating a short pulse of electrical energy lasting from four to ten micro-seconds and at a frequency of either 0.5 MC, 1 MC, 2¼ MC or 5 MC. This pulse is then applied to a quartz crystal which has a characteristic, known as the Curie effect, of changing electrical energy into mechanical vibration at a frequency which is determined by the crystal and by the instrument itself. The crystal is then applied to the work and these vibrations are transmitted into it and travel through it. This quartz crystal is used not only as the sending element, but also as the receiving element, and when a mechanical vibration is impressed on it, the crystal has the property of transforming this vibration into electrical energy. In normal operation the pulse which has been sent into the material travels until it is reflected from an interface, from which it returns to the crystal. The crystal transforms the reflected pulse back into electrical energy which is applied to an amplifier and then to a cathode ray tube. The cathode ray tube may be considered as a high speed clock calibrated in micro-seconds.

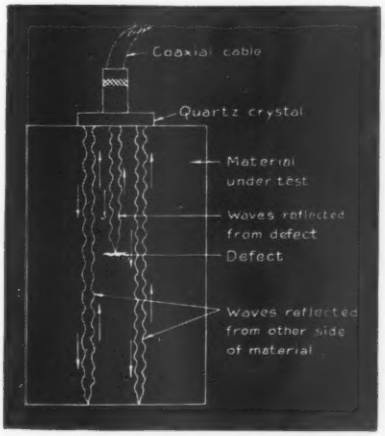


Fig. 2. Supersonics travelling in a material

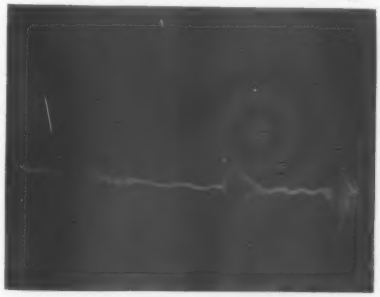


Fig. 3. Typical Reflectogram

Since the velocity of propagation of supersonics in any one material is constant, the elapsed time will always be the same for any specific distance travelled. Thus a pulse travelling through a piece of material to the opposite side will return in a given time which may be read directly from the cathode ray tube. If there is a flaw in the path, the pulse will be reflected from the flaw before it reaches the opposite side; it will therefore travel a shorter total distance and the time of travel will be correspondingly less. The distance now indicated on the tube will be less than that indicated for a reflection from the opposite side. The observer therefore knows that there is an interface between the crystal and the opposite side. This interface must be a discontinuity. The cathode ray tube is calibrated in distance and no cal-

Excerpts from paper presented at A. G. A. Chemical and Production Conference, Hotel New Yorker, New York, June 2-4.

Fig. 4. Testing locomotive axles

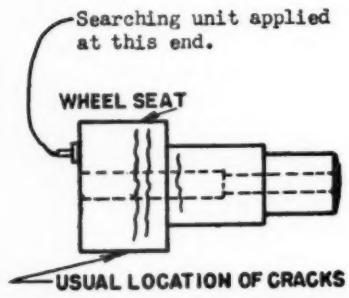


Fig. 5. Crankpin, showing location of cracks

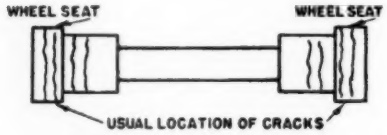


Fig. 6. Axle showing location of cracks

culations or interpretations are necessary to read it.

Figure 1 is a block diagram of the Supersonic Reflectoscope.

Figure 2 is a descriptive diagram of the action of the testing pulse.

Figure 3 is a typical reflectogram showing a reflection from both a flaw and the opposite side.

The initial pulse produced by the pulse generator is at the left and represents the surface of the material under test; the center indication is a reflection from some interface before the opposite side and the indication at the right is the indication of the opposite side.

In order to get maximum energy into the work it is necessary to use some couplant between the face of the crystal and the work. This couplant usually takes the form of oil and may be either transformer oil, glycerine or any one of a number of liquids. From a practical point of view, a thin transformer oil appears ideal. This oil is spread upon the surface of the part to be tested and the crystal pressed against it. The supersonic energy will then pass through the oil into the part with comparatively little reflection at the interface.

Surface

The surface of the part being tested should be comparatively smooth. Where the material is extremely irregular, good contact is prevented and the amount of energy transmitted into the work becomes insufficient. This action may also take place when the surface is badly pitted or covered with heavy coatings of paint. Such an irregular surface may be suitably treated for test by grinding with a hand grinder or sanding device. Machine surfaces are usually satisfactory without any treatment as are most rolled or forged surfaces, but sometimes cleaning with a portable sander or brush is advisable. Scale is not a handicap and may be left on so long as it is securely attached.

Curved surfaces may be tested where the curvature is even, such as in a round pipe. When the convex curvature is of a radius greater than nine inches, flat crystals may be used, but where the radius is less than nine inches, special curved crystals must be applied. Convex surfaces with a radius of 12 inches or greater may be tested with flat crystals, but on greater curvature, convex crystals must be used.

Distance Tested

The Supersonic Reflectoscope can test for flaws or interfaces up to approximately 25 feet from the testing surface. Flaws beyond these limits can sometimes be found depending upon the material and the skill of the operator. Various frequencies are provided so that materials of different characteristics may be tested. Flaws may be located no matter what their orientation, but they will give maximum indications when they are in a plane at right angles to the beam since they will intercept a much greater amount of the total beam area.

When the flaw is below a certain size, approximately .04 inch in diameter and about 1/8 inch long, the ability of the Supersonic Reflectoscope to find it varies somewhat with distance. Thus it is usually easier to find a flaw of this size six inches away than six feet away. So long as the defect falls under such a value in size, we may roughly say that the Supersonic Reflectoscope will find a flaw whose diameter is approximately 1/10 of one percent of the distance from the flaw to the face of searching unit. Whenever the flaw becomes larger than this size, the relation no longer holds and the Supersonic Reflectoscope works on a more or less absolute basis.

The Supersonic Reflectoscope has been used in testing steel, aluminum, magnesium, brass, glass, plastics and other materials.

In ordinary testing, the material is first smoothed off by means of a portable grinder or sander. The grit and dust produced by this operation is wiped away and a thin film of oil is applied. The searching unit is then pressed against the material and the operator watches the oscilloscope as he moves the crystal over the surface.

Testing Shafts—All types of shafts and axles may be satisfactorily tested when one end is available. By applying the unit to the end the entire length of the shaft is tested without removing it from the equipment in which it operates. Figure 4 shows an operator testing a locomotive axle, and Figures 5 and 6 show the usual location of cracks which may be found by supersonic testing. In

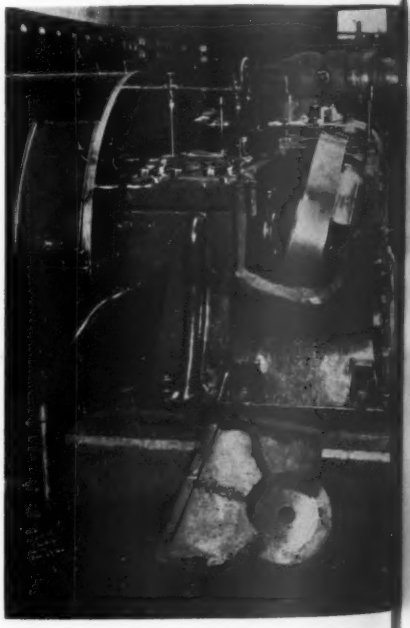


Fig. 7. Wreck of horizontal, single cylinder engine caused by a broken crankshaft

this manner axles on tractors have been tested both before and after installation at the R. E. Le Tourneau Plant on their earth moving equipment. Figure 7 shows the type of wreck which may be caused in a single cylinder engine by a broken crankshaft.

Testing Prior to Repair— Figure 8 shows a cast cylinder which was also tested successfully by supersonics. The Supersonic Reflectoscope may be lifted out of its shock mounting for specific applications and is here shown on a lift truck for convenient handling. The machinery under test was a large pressed cylinder which had been cracked through the top. It was preferable to repair this by cutting out the cracked area and re-welding the remainder. Supersonic testing was therefore used to determine the exact area of the damaged portion. In order to do this, the top part of the cylinder was cleaned off, divided into sections, and each identified by a number. A full scale drawing was then provided and notations made for later repair work. Incidentally, in this test a porous condition was also located.

Castings—Another type of test is a paper machine which has a pressure roll, one end of which was available for test. From this end the entire pressure roll could be tested. The roll is a shell made of cast iron 12 feet in diameter and 2.5 inches in wall thickness. Porous areas within it were easily located. Reflectogram, shows a crack 20 inches from the end of the roll. Such reflectograms may be easily photographed. As a result of this test the manufacturer now plans to have future castings tested at the factory so that any necessary repairs can be made prior to installation.

Fatigue Testing—Fatigue cracks may be progressive and may start from a minor surface imperfection or internal flaw. Supersonic testing not only enables the operator to locate these fatigue cracks before they reach dangerous proportions, but also allows him to follow their growth after they start. Sometimes the crack or defect is so slight that it may not be considered serious. In such cases, periodic checking will disclose whether or not the flaws are progressive and whether they will cause breakdown at a later date. At the point where the size of the defect becomes too great for safety the part may be removed and the possibility of damage avoided.

Fig. 8. Cast cylinder being tested

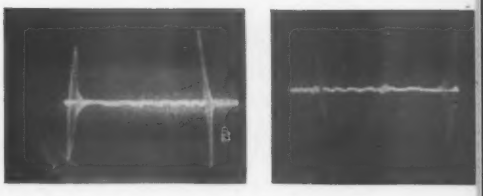


Fig. 9. Reflectograms showing good section of cast cylinder (left) and bad section (right)

Periodic tests for progressive fatigue cracks are of great value for maintaining operation of essential machinery, inasmuch as replacement can be planned and made at the most convenient time.

The examples cited are illustrative of the types of tests which can be made by supersonics. The materials used in plant equipment are for the most part readily tested with this new method and the results to date indicate a wider and wider acceptance. New problems arising are rapidly being solved through the cooperation of test research with the industry in which the problem arises.

Saving Face

● New kitchen ranges being readied for the home market are so completely automatic that they almost cook a meal by themselves. In order not to let the housewife out of the picture altogether, the manufacturers have put a line of dials on the ranges for the wife who likes to feel she's doing something.

—*N. Y. Journal of Commerce.*

White-Collar Incomes Score Largest Gains

ANNUAL incomes of so-called "white collar" families rose more last year than those of the combined skilled, semi-skilled and unskilled wage earners, according to a bulletin of the Federal Reserve Board.

In contrast with the widely-held assumption that most salaried or professional workers had suffered acutely between rising prices and fixed incomes, the Federal Reserve Bulletin for July stated that increases in annual income in 1946 compared with 1945 were "particularly marked" for the white-collar group.

For the wage earner, ranging from skilled to unskilled, the report added, there was "no significant change." The board's conclusions were drawn from a broad statistical survey of consumer finances.

The statement on the relative well-being of the white-collar family was based on figures indicating that the "median" or "middle" annual income of the country's 46.6 million "spending units" rose from $2,020 in 1945 to $2,300 in 1946. A "spending unit" is a related group living in the same dwelling and pooling its income.

The report indicated that incomes of white-collar families improved more on an annual basis than those of the wage earner chiefly because of the steadiness of their employment. Reductions in total time worked for the year by wage earners more than offset the rise in hourly wage rates, it was said.

In addition, the middle annual income of professional families during that period increased from $3,300 to $4,000; for the managerial and self-employed group, from $3,300 to $3,700, and for the clerical and sales personnel group, from $2,200 to $2,600.

The annual incomes of the combined skilled, semi-skilled and un-skilled workers' families, on the other hand, rose only from $2,200 in 1945 to $2,300 last year, the report said.

The "median" income is the point at which there are the same number of spending units with a greater income as there are units with a smaller one.

In addition to the general advance of incomes in the white-collar category, the report showed that about 60 percent of all family "spending units," or about 27.5 million had incomes of $2,000 or more in 1946, compared with 53 percent, or 24.5 million the previous year. It was noted that the rises were cancelled out by "substantial increases in prices of consumer goods."

There was no significant change between 1945 and last year in the proportion of total income received by the 30 percent of the family units in the top brackets for those years, the board stated. It added that this 30 percent had 60 percent of total money income, while the remaining 70 percent received 40 percent.

Emphasizing in another way the concentration of income in a relatively few families, the report stated that about one-tenth of all spending units, or about 4.6 million, received incomes ranging from $5,000 a year and upward, and accounted for about 33 percent of all money income received during the year. The bottom tenth of the spending group received about one percent.

The top tenth also held about 40 percent of all savings in bank accounts and government bonds, the board added.

Natural Gas Production and Marketing

LEGAL and economic aspects of producing and marketing natural gas were discussed by Marshall Newcomb of Dallas, general attorney for Lone Star Gas Co., before the State Bar of Texas mineral law section during the bar convention in Dallas the first week in July. More than 500 lawyers throughout Texas attended the section meeting.

Mr. Newcomb concluded that the recent Interstate Natural Gas Co. decision by the United States Supreme Court brings within federal regulation any gas produced or gathered for movement into interstate commerce. It gives the Federal Power Commission authority to fix the price of such gas when sold at the wells or from gathering lines if it is destined for transportation in interstate commerce, he said.

Oil and gas-producing states, especially Texas, have been urging Congress to amend the Natural Gas Act to specify that the F.P.C. shall not regulate production, gathering and processing of gas before it actually enters an interstate pipeline.

"Producers and gatherers of natural gas fear federal regulation under the Natural Gas Act because it would place them in the category of a public utility and thus subject them to the same type of regulation the Federal Power Commission employs in regulating gas companies," Mr. Newcomb said.

The attorney expressed regret that the Texas Legislature failed to pass an oil and gas unitization law, which he said would benefit all parties, including the public. Most states have such a law, he said. He noted that state pooling laws do not protect operators from antitrust prosecution by the Federal Government.

Mr. Newcomb told of plans in Texas directed toward the conservation of casinghead gas.

"The Texas Gas Investigating Committee stated that casinghead gas conservation projects in the nature of additional extraction and compression plants are planned to be completed in three years which will ultimately save up to one-half of the casinghead gas now flaring," he said.

"In each of the principal natural gas producing states, there have been advocates for state legislation which would prohibit the exportation of natural gas altogether, or limit the quantity which could be exported, or by discriminatory taxation discourage its transportation out of the state of production. But any such prohibition or taxation by a state which would prevent or burden the sale and transportation of natural gas in interstate commerce would be invalid because it would be in conflict with the commerce clause of the Federal Constitution. The Supreme Court of the United States has already spoken quite definitely to that effect.

"Those who are closely identified with the natural gas business entertain no fears that the supply of natural gas will be exhausted, or that there will not be enough gas to meet the demands of the public within the forseeable future," he said. "What they are concerned with is the impact on their business of competing fuels, such as the gas which can be manufactured from coal."

Mr. Newcomb referred to the following recent testimony of Dr. W. K. Lewis, dean of chemical engineering, Massachusetts Institute of Technology: ". . . I wish to emphasize at the start that natural gas is definitely *not* an 'irreplaceable' resource. Neither technically nor economically can it be so regarded. Both natural gas and oil are completely replaceable by synthesis of these products from coal and by this means the 'reserves' of gas and oil can readily be extended for more than 1,000 years into the future.

"It is today technically feasible to manufacture methane from coal and if desired a gas with a heating value considerably higher than that of methane can be made. . . . I do not think it reasonable to look for considerable commercial development of these synthetic processes within, say, 10 years.

"Such a development would obviously mean that natural gas would lose some of its present markets. It would, in effect, be backed up into the producing areas. In view of the 50 years or more supply of natural gas now known and rapid rate of new discoveries, this backing up might in fact create a problem of surplus in the gas producing regions. Adding to this the outlook for atomic power conceivably might mean that, far from concern over future shortage of gas, we will never actually use up all we now have."

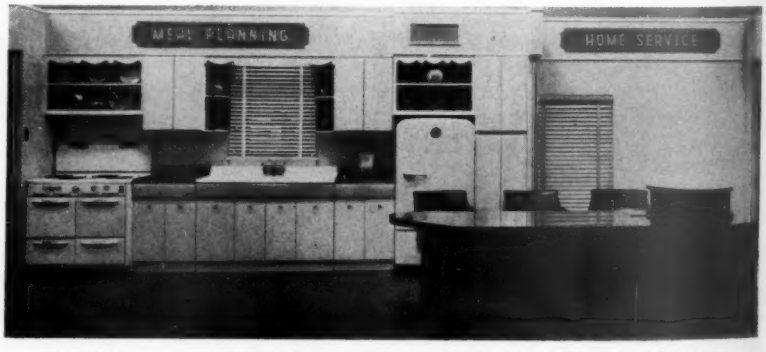
Washington Utility Sports "New" Lobby

RECENT changes in the display lobby of the Washington (D.C.) Gas Light Company's main office building, delayed until now by materials shortages, offer unique provision for the comfort and convenience of customers and employees as well as an impressive setting for modern gas appliances.

The latest functional furniture together with subdued lighting, carefully selected window draperies and wood panelling create an atmosphere of color and warmth. Among benefits to customers are writing desks for standing or sitting, and inviting loose-cushion lounges. Sales demonstrators are provided with bulit-in desks and the home service representative with two-level consultation desk equipment—a lower level for seated customers and a higher one for standing groups.

The home service information center is combined with a full-scale model kitchen where the most modern equipment is on exhibit. Elsewhere in the lobby, various appliances sold by the company are shown against individual backgrounds tinted to represent colorful kitchen walls in a home.

Remodeled lobby of Washington Gas Light Co. is impressive setting for gas appliances



Utility's home service information center is combined with a full-scale model kitchen

Production of Appliances Gains

DESPITE continuing steel shortages, the Gas Appliance Manufacturers Association reports that gas ranges produced and shipped during the first six months of 1947 totalled 1,166,000 units, an increase of 40.6 percent over the 829,300 units shipped during the corresponding period in 1946.

The industry's range production is 10,600 units behind its peak year of 1941, when 1,176,600 gas ranges were shipped during the first six months.

The estimated total manufacturers' value of units shipped during the first half of 1947 is approximately $94 million, and according to the G.A.M.A. estimate, 25.5 percent of the gas ranges shipped during this period were for use with liquefied petroleum gas.

Automatic gas water heater shipments for the first six months of 1947 reached an all-time high of 937,700 units, representing an increase of 77.9 percent over this same period in the preceding year.

Shipments of automatic water heaters during this first half of 1947 were greater than for any calendar year, with the exception of 1946. The manufacturers' value is estimated at approximately $42.8 million.

Indications are that 22.4 percent of the total shipments during the first six months' period of this year were for use with liquefied petroleum gas.

Temporary Gas Rate Increases Granted

The Brooklyn Union Gas Co. expects increased revenue of more than $1.8 million to accrue from temporary increases in the utility's gas rates effective July 28 and continuing until July 1, 1948, unless the New York State Public Service Commission directs otherwise in the meantime.

The increase was based on the company's need for additional revenue to meet higher taxes, increased wages and materials costs and covers all classifications of Brooklyn Union's 800,000-odd customers. The minimum monthly charge is increased by the P.S.C. order from $1.00 to $1.03.

The increases add five cents to consumers' gas bills for each 1,000 cubic feet of gas used, plus an additional five cents for each 1,000 feet used for residential purposes over 10,000 cubic feet a month. The majority of customers affected by the latter provision are those using gas for house heating.

Rates to small consumers will be increased by three percent, ranging upward for greater consumptions to 6.4 percent for usage of 10,000 cubic feet per meter per month and a higher percentage increase for consumptions in excess. The same is true generally for the other service classifications.

Kings County Lighting Co., has been granted a temporary increase in gas rates effective through June 30, 1948 affecting the Bay Ridge, Bensonhurst, Borough Park and Bath Beach sections of Brooklyn. The rise was granted by the P.S.C. following the company's plea that added revenue was needed to meet an anticipated $400,000 increase in 1947 operating costs over 1946.

The change will mean a 20 percent increase in rates paid by large gas users, but will not apply at all to consumers using 500 cubic feet or less monthly. It will mean an increase of 30 cents monthly where 2,000 cubic feet are used.

Milo R. Maltbie, chairman of the commission, indicated that the proposed rate schedule would be re-examined by the commission.

A.G.A. Survey Estimates 1947-1949 Gas Range Sales at Nearly Seven Million

GAS utility companies estimate that their sales and that of appliance dealers will total nearly seven million gas ranges in the three-year period 1947 to 1949 inclusive, according to a study recently completed by the Bureau of Statistics of the American Gas Association. This estimate was based upon replies received from utilities who serve 81 percent of the total residential customers of the gas industry and who were queried by questionnaires mailed in January 1947.

Actual shipments by manufacturers for the first six months of 1947, as reported by the Gas Appliance Manufacturers Association, were 1,166,000 gas ranges, thus sales appear to be running close to estimates of the gas utilities revealed in the A. G. A. study.

The same study brought out that utilities expect a total of 3,257,900 automatic gas water heaters, 599,100 manually-operated water heaters, 1,875,600 gas house heating units, and 1,464,000 gas refrigerators to be sold in their territories during the three-year period. The conservative nature of the water heating estimate is shown by the fact that nearly one million automatic gas water heaters were shipped in the first six months of 1947, while the utilities estimates for the entire year were slightly above one million units.

In making the estimates, the utilities were asked to assume a sufficient supply of appliances to meet all demands, except in the case of house heating units where they were asked to limit the estimates to the number of heating customers which they would be able to serve.

Returns were tabulated regionally and by type of gas distributed by the utility, and the estimates compared with the residential customers of the reporting companies. This ratio was then applied to regional totals of residential customers for each type of gas to obtain sales estimates for the entire industry. To obtain an over-all estimate of sales, the utility appliance estimates were adjusted proportionately in the case of ranges and water heaters to include units designed for use with bottled gas.

Detailed figures are shown below.

UTILITY ESTIMATES OF APPLIANCE SALES IN UNITS
(Range and Water Heater sales are also shown adjusted to reflect Bottled Gas Units not reported)

	1947	*1948*	*1949*
Ranges			
Including Bottled Gas Units	2,195,800(a)	2,244,400	2,247,300
Excluding Bottled Gas Units	1,722,200	1,760,300	1,762,600
Water Heaters(b)			
Automatic			
Including Bottled Gas Units	1,051,000	1,102,000	1,104,900
Excluding Bottled Gas Units	946,000	992,000	994,500
Manual			
Including Bottled Gas Units	214,500	200,300	174,300
Excluding Bottled Gas Units	193,100	180,300	156,900
TOTAL Including Bottled Gas Units	1,265,500	1,302,300	1,279,200
TOTAL Excluding Bottled Gas Units	1,139,100	1,172,300	1,151,400
Central House Heating			
Floor Furnaces	220,900	241,600	242,100
Warm Air	201,100	217,200	232,300
Boiler	23,200	34,000	33,100
Conversion	97,900	147,500	168,000
Air Conditioners	3,400	5,600	7,700
TOTAL Excluding Bottled Gas Units	546,500	645,900	683,200
Refrigerators			
4 cubic feet	81,600	94,000	97,700
6 cubic feet	236,600	271,800	282,200
8 cubic feet	121,200	135,400	143,500
TOTAL Excluding Bottled Gas Units	439,400	501,200	523,400

(a) Gas Appliance Manufacturers Association reports 1,166,000 gas ranges shipped during the first six months of 1947.

(b) Water heater estimates appear low since Gas Appliance Manufacturers Association reports that shipments of automatic gas water heaters totaled 937,700 units during the first six months of 1947.

New A. G. A. Mat Service Used by Newspapers

KITCHEN MEMO
BY
JEAN CLARKE
When the main dish of a meal can be cooked by merely clicking on the flame of the broiler, that means more leisure for the busy housewife. Here's a Hawaiian Grill that's simple, nourishing and tast
After preheating broiling com
ment and pan 5 minutes to b
temperature (about 550°
broiler grid about 3"
gas flame
(2 lbs
pepp
6

A PICKED list of 5,000 newspapers throughout the country is currently receiving "Kitchen Memo," a new mat service mailed the first day of every month by the Publicity Bureau of the American Gas Association.

The service always includes a tested recipe, three or four items on homemaking—shortcuts to better cooking, care of top burners or oven or broiler, and food notes. In each paragraph the word "gas," "flame" or "gas ranges" is used.

Clippings returned from the two editions already sent out show that "Kitchen Memo" is widely-used by all kinds of newspapers—from those with 50,000 circulation to the smaller weeklies. Written requests for copies are also being made by syndicates, women's page editors and radio commentators.

Consolidated Edison Reports to Employees

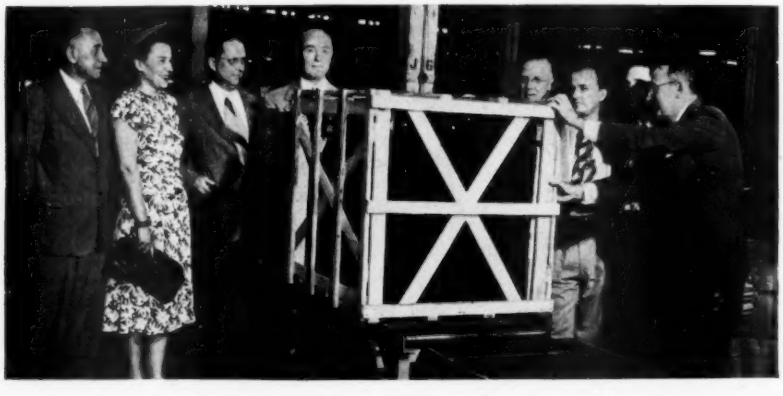
CONSOLIDATED EDISON CO. of New York, Inc., on June 30 mailed to the homes of its more than 28,000 employees a report of the company's business in 1946.

Reviewing events of the year together with earnings and expenditures, from the employee's point of view, the illustrated report restates facts included in the annual report to stockholders which was mailed earlier in the year, with additional items of interest to employees. Included is a letter signed by Ralph H. Tapscott, president, and Hudson R. Searing, executive vice-president.

The report states that average weekly earnings of employees including overtime has risen from $32.93 in 1936 to $55.68 ten years later, according to an accompanying chart. Nearly a full page is given over to a review of the negotiations in the last three years between the company and the Brotherhood of Consolidated Edison Employees. A board of arbitration earlier this year granted workers 1947 wage increases which it estimated would total $9,064,470 on an annual basis. The company's bill for wages paid in 1946 amounted to $90,734,000, with $80,512,000 paid to operating employees in wages, salaries and pensions, and $10,222,000 paid in construction wages.

The report also carries a memorial listing of six employees who died in the armed services and whose deaths were not noted in the 1945 annual report to employees when 91 similar casualties were announced.

New American Stove Plant in Production



American Stove officials and guests inspecting first heavy duty gas range from former war production plant in Cleveland, purchased and equipped at cost of over $1 million are: Karl Emmerling, Cleveland; Jean Thompson, A. G. A.; Bruce R. Tritton; W. H. Frick; A. W. Leeseberg; S. J. Szabo; Virgil Stakley and Lloyd C. Ginn

Notes from F. P. C.

The Hope Natural Gas Co., Clarksburg, W. Va., principal supply company of the Consolidated Gas System, has received authorization to construct and operate natural gas facilities in West Virginia to enable the company to receive an additional 50 million cubic feet of gas a day and increasing to 165 million cubic feet per day the company's capacity to take gas from Tennessee Gas and Transmission Company. The additional gas is to be transmitted to The East Ohio Gas Co., Cleveland, The Peoples Natural Gas Co., Omaha, The River Gas Co., Marietta, O., and New York State Natural Gas Corp. to help meet increased demands on their systems. The cost of the facilities is estimated at $3,004,507.

Texas Eastern Transmission Corp. has received permission to install additional compressor facilities by January 1948 on the Big and Little Big Inch lines.

In its application the company stated that the new facilities together with 28,000 horsepower already authorized would increase the capacity of the lines to 340 million cubic feet of gas a day. Cost of the additional compressors would approximate $3.2 million.

United Natural Gas Co., Oil City, Pa., has been authorized to construct approximately 71 miles of 20-inch natural gas pipeline in Pennsylvania for the purpose of transporting gas from the Big and Little Big Inch lines. The authorization is without prejudice to any findings or orders which have been or may be made by the Commission concerning Texas Eastern Transmission Corporation's application to operate the Inch Lines for gas transmission. Cost of construction was estimated by the company at $3,307,131.

The Tennessee Gas Transmission Co., a Delaware corporation, has been authorized to acquire through consolidation and to operate all the facilities subject to F.P.C. jurisdiction now operated or in process of construction by Tennessee Gas and Transmission Co., a Tennessee corporation, and to succeed to all other rights and obligations of Tennessee Gas and Transmission Co. over which the Commission has jurisdiction under authority of the Natural Gas Act, as amended.

Evidence submitted showed that the new corporation was organized for the sole purpose of enabling it through consolidation to acquire the properties and other assets and assume the liabilities of Tennessee Gas

and Transmission Co. and that an agreement of consolidation was entered into by the two companies under date of June 11, 1947.

Tennessee Gas Transmission Co. has been authorized to construct and operate natural gas pipeline facilities designed to increase the delivery capacity of its system from 381 million to 600 million cubic feet of gas per day. Over-all cost of construction would approximate $53,542,835.

The F.P.C. has supplemented its "General Rules of Practice and Procedure" by the addition of the following rule, effective immediately:

"Section 03.79—*Jurisdictional Status of Independent Producers and Gatherers.* The Federal Power Commission is of the opinion that it was the intent of the Congress that the control of production or gathering of natural gas should remain a function of the States and that the Natural Gas Act should not provide for regulation of those subjects.

"For the purpose of administering the Natural Gas Act, the Commission will construe the exemption contained in Section 1(b), to the effect that the provisions of the Act shall not apply to the 'production or gathering' of natural gas, as including arm's length sales of natural gas by independent producers and gatherers, made during the course or upon completion of production and gathering. The Commission, consistent with this construction, will not assert jurisdiction over such producers and gatherers who might be subject to jurisdiction solely because of such sales."

Morning Mail

I WISH to thank you most sincerely for all of your efforts in my behalf and also for the promptness with which the available material was received. It gives me a great deal of pleasure to know that I have such an organization as the American Gas Association to lean upon when I have problems and no answers."—*Gas Company Member*

Employee Relations Conference Planned

A. G. A. Personnel Committee in Cincinnati. Seated, left to right: J. E. Heyke, Jr., Brooklyn; L. A. Brandt, Chicago; C. B. Boulet, Milwaukee; L. M. Ayers, Pittsburgh; Fred R. Rauch, Cincinnati, chairman; Kurwin R. Boyes, A. G. A.; W. H. Senyard, New Orleans; J. P. Flemming, New York; H. S. Richmond, Kalamazoo, Mich., and C. E. Jurgensen, Minneapolis. Standing: W. L. Haight, Racine, Wisc., E. J. Brill, Allertown, Pa.; A. J. Haswell, Oklahoma City; G. W. Fewkes, Philadelphia; C. D. Magruder, Washington, D. C., and E. G. Huck, Cincinnati

PLANS for an employee relations conference for the gas industry to be held at the Adolphus Hotel, in Dallas, November 19-20, are being completed by the American Gas Association Personnel Committee and the A. G. A. Southwest and Midwest Personnel Conferences which jointly will sponsor the event. The program is being arranged under supervision of the chairmen of the three groups: Fred R. Rauch, Cincinnati Gas & Electric Co.; W. R. Senyard, Louisiana Power & Light Co., New Orleans, and D. L. Sedgwick, The Kansas Power & Light Co., Salina.

Announcement of the conference was made following a meeting of the A. G. A. Personnel Committee at the Netherland Plaza Hotel, Cincinnati, on July 16. This group has been assigned by the Association's Executive Committee to act as a clearing house for the Association's employee training activities in order to avoid duplication of effort and assure a more effective over-all training program. The following subcommittee on employee training was appointed: L. A. Brandt, The Peoples Gas Light & Coke Co., Chicago; chairman; G. W. Fewkes, Philadelphia Electric Co., and J. E. Heyke, Jr., The Brooklyn Union Gas Company.

In an informative discussion led by C. E. Jurgensen, Minneapolis Gas Light Co., some exceptionally good results were reported in companies where psychological tests are being properly applied in the selection of employees. At the same time limitations in the use of these tests were recognized.

According to custom a meeting of the Edison Electric Institute Industrial Relations Committee was held the following day. Members of each committee were invited to attend both meetings. They were also guests of Walter C. Beckjord, president, Cincinnati Gas & Electric Co., during a buffet supper at the Cincinnati Yacht Club and an evening sail on the Ohio River.

Laclede Honors Magic Blue Flame at Home Show

Eye-catching 8,000 square foot display of The Laclede Gas Light Co. at the recent St. Louis Home Builders' Exposition was staged in association with local gas appliance dealers and manufacturers. The nine-day show attracted 85,000 people

Summer Activities of I. G. T. Fellows

FELLOWS who have completed their first academic year at the Institute of Gas Technology are now engaged in summer employment-training in the gas industry. Richard H. Cook is with the Rochester Gas and Electric Co., William J. Halvorsen is with the Pittsburgh Consolidation Coal Co. and James H. Kelly has reported to the Colorado Interstate Gas Company, Colorado Springs. Douglas S. Chapin has the interesting and unusual assignment of working with Martin Shepherd of the National Bureau of Standards on gas analysis research sponsored by the American Gas Association.

Willard M. Dow, who has completed three academic years at I.G.T., is spending the summer at the Institute working on doctoral research. His problem is an investigation of the transfer of heat in beds of fluidized solids, and is being carried out under the direction of Professor Max Jakob. Eugene H. Luntey is also in residence at the Institute this summer doing research work. He has completed three semesters of academic work and has started to work on his problem for the master's degree—an investigation of the influence of particle characteristics on the behavior of a column of fluidized solids.

John W. Selph, Jr., of Lawrenceburg, Tenn., has completed most of the requirements for the degree of Master of Gas Technology and expects to accept a position in the gas industry by September. He spent one summer term with The East Ohio Gas Co., Cleveland, and another with Servel. His master's research problem was an investigation of the suitability of a new method for determining gas viscosity. He is spending the summer "boning up" for his final examinations.

Mr. Cook is a native of St. Johnsbury, Vt., and a graduate in chemical engineering from Syracuse University in December 1943. He reported to the Institute the following spring. He had the rank of lieutenant (j.g.), U.S.N.R. at the time of his release from the service where he was assigned to communications and electronics. He hopes to find employment ultimately in upper New York State.

Mr. Chapin was graduated in chemistry by Kansas State College in January, 1944, and claims Manhattan, Kansas, as his home. After several months with the Engineering Experiment Station of his alma mater, he entered the armed forces and served in the Army Medical Department, rising from private to sergeant.

Mr. Dow was graduated in petroleum engineering by the Colorado School of Mines in 1942, and calls Edgewater, Colo., home. He was awarded his master's degree in Gas Technology in 1945, and his research problem on heat transfer was published in the Trans. A.S.M.E. *68*, 123 (1946). He spent 2.5 years in the service doing tactical radar and finally personnel work. At the time of release from active duty his rank was lieutenant (j.g.), U.S.N.R. Summer employment-training was provided by The East Ohio Gas Co. and later by Servel, Inc. Mr. Dow has an unusually fine academic record, and hopes to be the Institute's first Ph.D. in Gas Technology.

Mr. Halvorsen, comes from Pulaski, Va., holds the degree of B.Ch.E. from Virginia Polytechnic Institute. He worked with the Standard Oil Co. (N.J.) at Baton Rouge for four years before coming to the Institute last fall. It was his interesting duty at Standard to work on the fluid catalytic cracking unit.

Mr. Kelly is a chemical engineering graduate of Louisiana Polytechnic Institute and a native of Shreveport, Louisiana. He worked with Standard at Baton Rouge for three years before entering the Institute. He hopes to work ultimately in the natural gas industry of the southwest. Production is his major interest.

Mr. Luntey came to the Institute from Buhl, Idaho, after graduating from the University of Idaho in chemical engineering in 1943. He spent one summer term at Servel, Inc., and completed one semester of academic work before the war. His second semester was interrupted by the temporary discontinuation of the educational program, and he enlisted in the U.S.N.R. where he was assigned to teaching tactical radar. He rose to the rank of lieutenant (j.g.). He is especially interested in business administration, and hopes to do this type of work eventually in the gas industry. He will graduate next winter with the degree of Master of Gas Technology.

In accordance with the curriculum prescribed, men pursuing graduate studies at the Institute must spend one summer in the gas industry in partial fulfillment of the requirements for the master's degree and two such periods for the doctor's degree. This work is offered by companies which are members of the Institute and is primarily training in various phases of the gas industry. It is expected to prove of great value ultimately to the industry as well as to the students.

Prospective students and employers are invited to write for the Institute's new catalog. Requests may be sent to Captain E. S. Pettyjohn, director, Technology Center, Chicago, Illinois.

Gas Air Conditioner Television Star

Servel all-year gas air conditioning unit received so much attention at St. Louis Home Builders' Show that officials of KSD's new station requested a televised demonstration. D. J. Fagin and Louis Rice, Servel, explain operations of model rushed by air from company's Evansville, Ind., plant while Harold Grams, KSD program director, adds continuity

Lone Star Initiates Five-Year Expansion

AN optimistic outlook for the growth and development of Lone Star Gas Company's territory has been voiced by President D. A. Hulcy of Dallas in announcing a five-year, $40 million program of extensions and additions to physical properties on the company's system. This amount has been allocated for construction and equipment to support natural gas service over a system comprising 325 towns and cities in Texas and Oklahoma.

The vast expansion program calls for an expenditure of $12 million in 1947, about half of which has already been completed, leaving some $6 million yet to be spent this year. The company contemplates expenditures of $10 million on the program in 1948, and $18 million will be spent for the three-year period from 1949 through 1951. The company will require $10 million in new money to support the program.

Among reasons for these huge expenditures, Mr. Hulcy explained, are construction of new distribution plants, extensions to established distribution systems, purchasing of new equipment, building of transmission lines to bring new sources of gas supply, construction of compressor stations and expansion of other facilities to meet demands for service in a rapidly growing territory.

"Healthy growth of Lone Star's territory is indicated," he added "by the fact that the company's 1947 program calls for establishment of new distribution plants in 14 towns. This project alone will add more than 2,500 meters to our lines. In addition, we have

increased our customers in established distribution plants throughout our system by more than 28,000 since June, 1946.

Mr. Hulcy listed principal expenditures in 1947 as follows: Pipeline construction in field gathering and transmission systems to tap additional reserves and also to provide increased pipeline capacity, $2.5 million; service lines, street mains, meters, regulators and other materials required in building new and enlarging present town distribution plants, $3.2 million; acquiring leases and drilling wells to insure adequate gas supply for many years, $2,250,000; dehydration, cycling and gasoline plants to treat gas and promote conservation, $1 million; compressor station construction and improvements to assure constant gas pressures throughout more than 5,000 miles of transmission lines, $900,000; expansion of butane gas facilities for customers beyond distribution mains, $700,000; new office buildings and furnishings, $375,000; supplementing existing facilities, such as automotive equipment and machinery and tools, $1 million.

Specific items in the 1947 program include exploration and development in producing areas where the company obtains gas, such as east central and west central Texas, and distribution plant construction.

"Miss Flame" Service Open to A. G. A. Members

THE Promotional Committee of the American Gas Association has voted to allow member companies to use "Miss Flame," a gas industry figure developed and copyrighted by A. G. A., in local advertising and promotion where proper application is made.

Companies desiring to use the figure should apply for permission to the Promotion Bureau, American Gas Association, 420 Lexington Avenue, New York 17, N. Y. Permission will be granted to member companies without charge on condition that proper precaution is exercised to protect the Association's copyright.

In addition the Bureau will make available at actual cost of preparation and handling a number of services connected with "Miss Flame," if a sufficient number of companies are interested.

Florida Utility Installs Propane-Air Plant

INSTALLATION of a new high pressure propane gas-air plant in Deland, Fla., has been announced by H. Hansell Hillyer, president, South Atlantic Gas Company.

Formerly Deland was served by carburetted water gas piped through a 20-mile transmission line from the company's plant in Sanford. Installation of the new plant and the conversion of customer appliances were directed by H. E. Ferris, vice-president in charge of production.

The plant consists of two 25 M.c.f. per hour gas-air machines and is capable of serving more than twice the present load in Deland. It provides 1,000 B.t.u. per cubic foot compared with the 525 B.t.u. water gas.

Television Show Result of Gas Industry Co-operation at "Village of Vision"

Paul Winchell and Jerry Mahoney "raid" gas refrigerator with help of assistant, Penny Flame, in television preview of scheduled "Gas Has Got It" broadcast over station WABD

A NEW television program, "Gas Has Got It," is being arranged by the American Gas Association together with Servel, Inc., and Cribben & Sexton Co., for presentation over station WABD, September 17, 8-8:30 p.m.

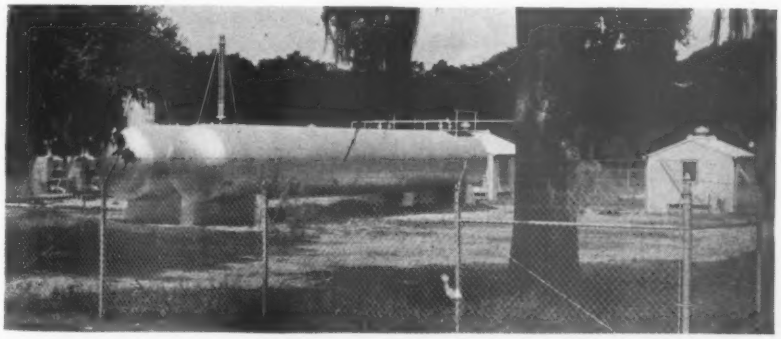
The well-known stage and television team of Paul Winchell and Jerry Mahoney, a ventriloquist duet, has been selected to help tell the story of the New Freedom Gas Kitchen. The production will be made through the courtesy of John Wanamaker stores and will be televised at the DuMont Television Studio in New York City.

Plans for the promotional venture were conceived following the early success of the current "Village of Vision" at John Wanamaker stores in New York and Philadelphia. Opening late this spring, the "village" included a large representation of gas appliances installed in completely constructed prefabricated homes which were decorated and furnished by the department store. Close co-operation between A. G. A., gas appliance manufacturers and affiliated utility companies enabled the showing of gas appliances in 11 of the 14 homes. Four complete New Freedom Gas Kitchens were included.

In the few homes with all-electric kitchens, gas house heating was provided. On the adjacent major appliance space eight additional complete kitchens were displayed with gas appliances in six of these.

Utility companies in the New York and Philadelphia area which helped in publicising and advertising the "village" included: Public Service Electric & Gas Co., Newark, N. J.; The Brooklyn Union Gas Co.; The Philadelphia Gas Works Co.; Kings County Lighting Co.; Westchester Lighting Co.; Brooklyn Borough Gas Co.; New York & Richmond Gas Co.; Long Island Lighting Co., and The Greenwich Gas Company.

Promotional arrangements for the "Village of Vision" and the coming television show have been handled by Frank Williams and Norval Jennings, A. G. A., and Robert Stevens, Servel, Inc., working in close harmony with William J. Young, vice-president, John Wanamaker.



South Atlantic Gas Company's new plant at Deland, Florida. Left to right: two gas-air units, two 30,000 gallon tanks, thermeter house and storage room, pump house

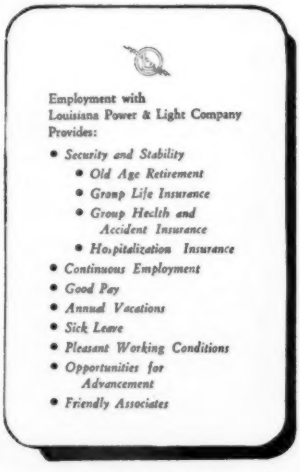
Gas Appliance Shown In "Victory Home"

RECORD attendance and interest in the "Victory Home of the Century" currently on display on Atlantic City's Steel Pier, were indicated at the half-way mark of the season this year. Originated as "The Home of 1936" and in 1937 renamed "The Home of the Century," the model dwelling has been displayed since 1936 to more than 500,000 persons a summer.

Receiving particular attention from visitors is the utility end of the house. Among the appliances displayed in this section are: Rheem automatic storage gas water heaters, Valley Welding & Boiler Company's automatic gas home disposal unit, Bendix gas automatic home dryer, Surface Combustion Corporation's gas-fired winter air conditioning unit, Cribben & Sexton gas range, Servel gas refrigerator and gas kitchen, Rheem and Reznor gas space heaters and Strait and Richards gas logs. All the gas products displayed are approved by the Gas Appliance Manufacturers Association and the American Gas Association.

View of a Servel-designed New Freedom Gas Kitchen on exhibit in the "Victory Home"

Louisiana Utility Has New Employee Card



Reverse side of identification card lists employee advantages, privileges, benefits

AS a constant reminder of advantages enjoyed as a member of the company, Louisiana Power & Light Co., New Orleans, is issuing a new type of identification card to its full-time employees.

The front is a conventional identification card signed by the president, the employee's supervisor and the employee. The reverse side of the card, however, lists the advantages, privileges and benefits enjoyed through association with the company. The cards are to be issued annually, and will be laminated in a plastic case. W. H. Senyard is director of personnel.

American Meter Opens New Plant

American Meter's new factory and offices

THE American Meter Co. opened a new factory and office building at 950 Tennessee Street, San Francisco 7, on August 1, with open house for employees, their families and friends and gas men of northern California.

The company's new San Francisco headquarters will co-ordinate and round out the total gas meter production for requirements of the Pacific Coast. The plant is a steel, brick and concrete structure of modern design and fireproof construction and is completely equipped with the most modern machinery and facilities for manufacture, repair and testing of gas meters. It is well-lighted and well-ventilated and has an attractive over-all appearance.

Convention Calendar

SEPTEMBER

8-10 •Mid-West Gas School and Conference, Iowa State College, Ames, Iowa.
10 •Southwest Personnel Conference, Mayo Hotel, Tulsa, Oklahoma.
12 •Midwest Personnel Conference, Antlers Hotel, Colorado Springs, Colorado.
15-17 •National Butane-Propane Association, Annual Convention and Exhibit, Jefferson Hotel, St. Louis.
17-19 •National Petroleum Association, Atlantic City.
19 •Oklahoma Public Utilities Association, Annual Conference, Biltmore Hotel, Oklahoma City.
23 •New Jersey Gas Association, Stacy-Trent Hotel, Trenton.
23-25 •Pacific Coast Gas Association, Hotel Del Coronado, San Diego, Calif.

OCTOBER

2-4 •Mortgage Bankers Association of America, Statler Hotel, Cleveland (A. G. A. will exhibit).
6-8 •A. G. A. Annual Convention, Cleveland, Ohio.
6-8 •Association of National Advertisers, Annual meeting, Atlantic City.
6-10 •National Safety Congress & Exposition, Chicago.
16-17 •Texas Mid-Continent Oil and Gas Association, San Antonio.
20-24 •National Metal Congress & Exposition, Amphitheater, Chicago (A. G. A. will exhibit).
21-23 •American Standards Association, Waldorf-Astoria Hotel, N. Y.

NOVEMBER

10-14 •National Hotel Exposition, Grand Central Palace, N. Y. (A. G. A. will exhibit).
13-14 •Mid-Southeastern Gas Association, Annual Meeting, Sir Walter Hotel, Raleigh, N. C.
19-20 •Gas Industry Employee Relations Conference, Adolphus Hotel, Dallas.

DECEMBER

1-5 •American Society of Mechanical Engineers, Annual Meeting.

Accounting Section

LEITH V. WATKINS, Chairman JOHN A. WILLIAMS, Vice-Chairman WALTER E. CAINE, Secretary

Use of the Multiplying Punch

BY GEORGE J. BESWICK AND HARRY G. LITTLEWORT

Consolidated Edison Co. of N. Y., Inc.

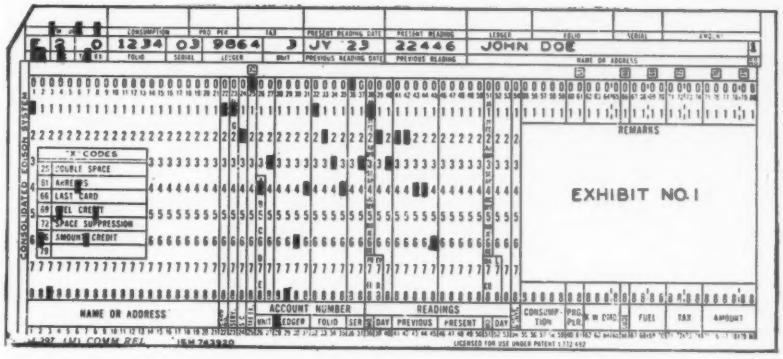
THE application of the Multiplying Punch to the calculation and extension of "irregular" bills for gas and electric service is in effect in several public utility companies with variations to meet the various rate conditions. The following presentation describes the application of this equipment to the operations in the Brooklyn District of the Consolidated Edison Co. where approximately 880,000 electric meters are involved, and where meter reading and billing is scheduled on a bi-monthly basis for all residential customers and all small commercial customers without demand meters. "Pro-rating" is on the basis of "tenths of a month."

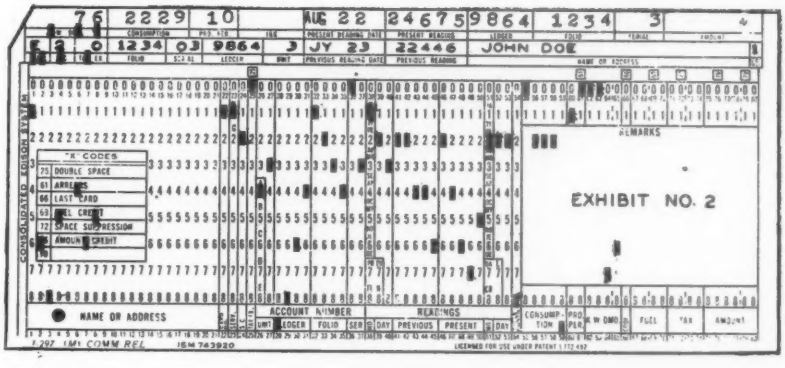
This operation is designed for use equally for gas and electric billing but it is now in use for electric billing only. The industry's interest in this particular installation is largely because of the unusually large number of variable billing factors which enter into the calculation of "irregular" bills under the prevailing rates. These factors are:

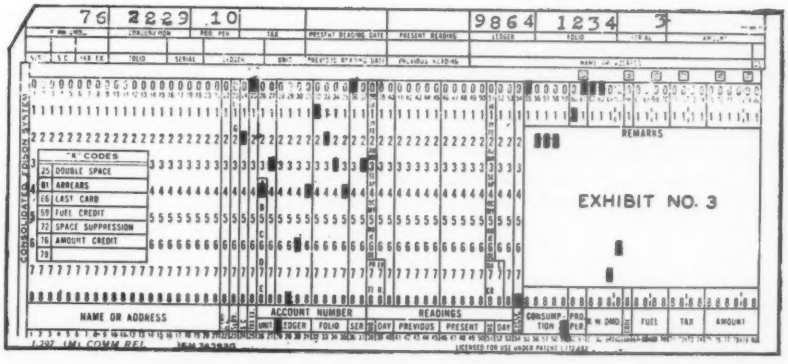
1. Monthly or bi-monthly application of rates
2. Long or short pro-rated billing periods in terms of tenths of a month
3. Minimum charge feature included in rates
4. Inclusion of demand in energy charge up to certain point, but imposition of separate demand charge thereafter
5. Fuel adjustment per kilowatt-hour applicable generally to all electric rates
6. Existence of "special provision" in small commercial rate whereby lesser of two possible demand and energy rates must be applied to give benefit of lower cost to customer
7. Taxable or non-taxable status with respect to city sales tax and requirement that city sales tax amount be calculated, reported and shown on the customer's bill as a separate item and included in the total amount of the bill.

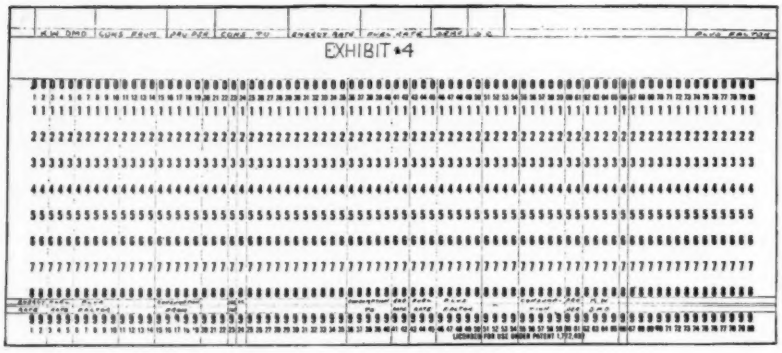
For the purpose of this presentation, the term "irregular bills" refers specifically to the following general groupings for billing purposes:

(a) Service Classification No. 1—Residential
Monthly bills of less than or more than 10/10ths
Bi-monthly bills of less than or more









than 20/10ths

(b) Service Classification No. 2—Commercial
Regular 10/10ths bills having billable demands

(c) Service Classification No. 2—Commercial
Irregular periods, less than or more than 10/10ths having billable demands

(d) Service Classification No. 2—Commercial
Irregular periods, less than or more than 20/10ths, without billable demands.

Prior to the application of the Multiplying Punch to irregular billing, all such charges were pre-figured and such calculations were subject to the usual possibilities of human mathematical errors. The performance of this work by the Multiplying Punch and other associated machines, together with *adequate and carefully developed proof operations,* has produced five years of virtually perfect accuracy of such billings. In addition, and by no means less important, the present mechanized method resulted in very substantial reductions in costs as compared to the clerical operations previously in effect.

The review clerks in the Accounting Units scan the meter reading binders and rapidly review the consumptions previously extended by the meter readers, enter the kilowatts of demand (if any) and the number of tenths (if for other than normal billing periods). The meter binders are then forwarded to key-punch operators with the corresponding "Advance" Billing cards.

Exhibit No. 1 shows the Advance Card as it is when withdrawn from the Advance Card file. At this point the card contains only the information which was punched into it when it was reproduced at the time of previous billing. The "advance" information is: name, card number, type of service, service classification, tax code, account number and the previous date and reading. Upon receipt of the binders and Advance Cards, the key-punch operators punch into the cards the billing factors. Exhibit No. 2 shows the Advance Card after the key-punch operator has punched into it the current billing information, i.e., present reading and date, cycle charge month, consumption, pro-rated period, and kilowatts of demand. The punched billing cards are then run through a Checking Tabulating Machine to prove the accuracy of the commodity consumption factor. The billing cards are then run through a Reproducing Gang Punch Machine which produces new Advance Cards for the next billing period. The billing cards are then run through a Horizontal Sorting Machine which sorts the cards into two groups, i.e., regular billing periods and irregular billing periods. The billing cards for all irregular billing periods are rerun through the Horizontal Sorting Machine which groups them according to consumption steps; they are then sorted into service classification order. All S.C. No. 2 cards are again run through the Horizontal Sorting Machine which at this time selects those cards having billable demands. At this time, the cards are also separated into the following three groups:

(a) Regular 10/10ths cards having billable demands

(b) Irregular billing period cards having billable demands.

(c) Irregular billing period cards, Service Classifications Nos. 1 and 2, without billable demands.

The billing cards having billable demands are then run through the Horizontal Sorting Machine and are sorted into numerical order according to kilowatts of demand sequence. While still in demand sequence, these cards are re-sorted by the Sorting Machine into pro-rated period (tenths) order and at this point, all 10/10ths period cards are segregated from the "irregular" period cards.

All of the irregular period billing cards having billable demands are run through a Reproducing Gang Punch Machine which creates a blue "processing card" into which has been reproduce-punched only the account number and the billing factors. Exhibit No. 3 illustrates the blue processing card as it appears immediately after its reproduction from the billing cards shown in Exhibit No. 2. The blue processing cards are then run through a numerical interpreter machine which prints across the top of the cards the factors which have been punched into them.

The use of the Multiplying Punch Machine for the calculation and preparation of irregular period bills, either with or without billable demands, necessitates the use of block master cards into which the necessary billing factors have been pre-punched. Exhibit No. 4 shows the block master card which is used to punch the billing factors into the blue processing card, i.e., energy rate step (which is always the lowest step for any particular total kilowatt-hour consumption), the fuel rate step per kilowatt-hour and the "add" or "plus" factor appropriate for the lowest energy rate step. In those cases where there are billable demands, the "add" or "plus" factor applicable to the demand is also included. The consumption (from and to) factors for each energy rate step are pre-punched into this card for the purpose of assuring the correct merging and selecting of the block master cards and the blue processing cards by the Collator in the next operation. The energy rate step, the fuel rate step and the add or plus factor are pre-punched into this card *twice,* in one field for reproducing purposes and again in a second field for comparing purposes. The pro-rated period and the kilowatts of billable demand, the type of service, and the service classification are also included. All of the factors mentioned as being included in this card are pre-punched into all block master cards which are retained in file for continuous use until a change in rate necessitates the manufacture of new block master cards. The application of these block master cards eliminates the necessity of having and handling hundreds of thousands of individual master cards which would be required to meet the various billing situations with respect to first, the number of tenths; second, the kilowatt-hour consumption and third, the kilowatts of maximum demand.

In the application of the Multiplying Punch Machine, as it has been developed for the purposes of this company, various mathematical short cuts have also been developed which have made it possible to use a re-

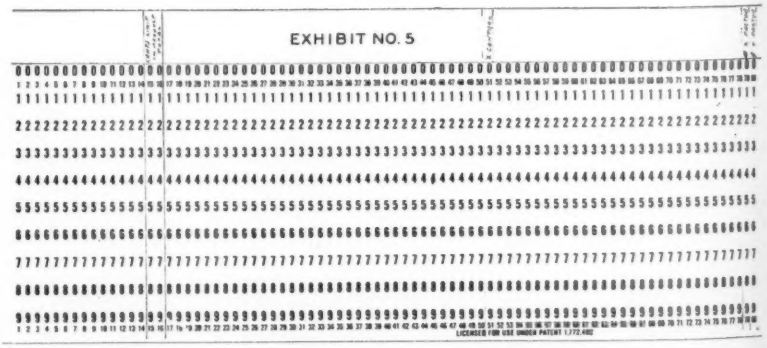


EXHIBIT # 6

ACCOUNT NO.	S. C. #	TAX CODE	CARD COUNT	KWHR	PRO RATE PERIOD	KW DEMAND	RATE STEP	PLUS FACTOR	FUEL	TAX	AMOUNT
7264 0560	2	0	1	01226	10	0052	4	00510	208	113	5735
2198 0298	2	0	1	00792	10	0053	4	00535	135	077	3915
7256 0112	2	0	1	01465	10	0055	4	00585	249	134	6828
1270 1026	2	1	1	00496	10	0058	4	00660	84	000	2728
1262 0677	2	1	1	01010	10	0060	4	00710	172	000	4922
7262 0509	2	0	1	01452	10	0060	4	00710	247	135	6900
1262 1111	2	1	1	00509	10	0063	4	00765	87	000	2908
4218 0679	2	0	1	01205	10	0071	4	00985	205	120	6130
1254 0544	2	0	1	00653	10	0078	4	01160	111	078	3961
6336 1034	2	0	1	00539	10	0082	4	01260	92	070	3578
1268 1390	2	0	1	01206	10	0098	4	01660	205	134	6823
1254 0084	2	1	1	01489	10	0132	4	02510	253	000	8719
2202 0269	2	1	1	01361	10	0148	4	02910	231	000	8585
			13	13403		1010*		14980	2279	861	71732*

X4 ←RATE STEP
+ 536.12
+ 1498.80 ←PLUS FACTOR
+ 22.79 ←FUEL
+ 8.61 ←TAX
717.32 ←AMOUNT

−650 ←NO CHARGE DEMAND
360 ←BILLABLE DEMAND
X25 ←DEMAND CHARGE
+ 720
9000 ←TOTAL DEMAND CHARGE
+ 5980 ←ENERGY PLUS FACTOR *

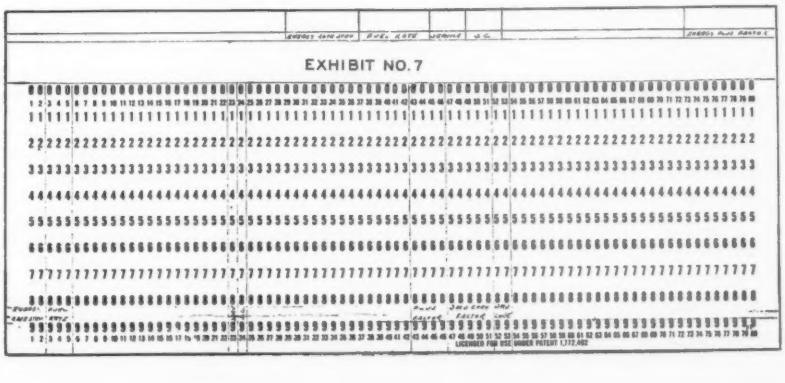
14980 ←PLUS FACTOR

* 13 BILLS - $4.60 ENERGY PLUS FACTOR FOR EACH BILL

stricted number of block master cards which cover the great majority of our billing situations. One of these formulas was to arrive at a pre-determined "add" factor for one period (1/10th) which would be applicable for a given kilowatt-hour consumption; another was the development of a pre-determined "add" factor which would be applicable to a given range in kilowatts of demand for one period (1/10th). This was accomplished by the use of block master cards in which the pre-determined energy add factor and the pre-determined add factor for kilowatts of demand had been pre-punched. Exhibit No. 7 shows the master card used in this step of the operation. Only one special master card is necessary for each energy step, regardless of the pro-rated period, up to 25.0 kilowatts of demand; and a second group of master cards for kilowatts of demand over 25.0 kilowatts, because of the change in demand charges over 25.0 kilowatts. These special block master cards are manually key-punched as follows:

Columns 1 to 2—Energy rate step price (per kwh)
Columns 3 to 5—Fuel rate
Column 23—Service
Column 24—Service classification
Columns 43 to 46—Energy plus factor (per one period)
Columns 47 to 51—Minus $12.50 (first 5.0 kw) no charge
Columns 52 to 53—25 cents charge (per 1.0 kw) (per one period).

The blue processing cards are manually segregated into various energy rate step groups. To determine these groups, each processing card having the consumption and pro-rated period previously punched is checked against a pre-determined printed listing on which is shown each pro-rated period up to 60/10ths and each period is set up in consumption step range showing energy step price and energy plus factor. By collating the appropriate master cards with the appropriate blue processing cards, these add factors for one-tenth are automatically punched into the processing cards by the gang punch machine; then by running the blue processing cards through the Multiplying Punch, the multiplication of these add factors for the full number of tenths involved is obtained. The blue processing cards for the regular billing periods (10/10ths) with billable demands or irregular period cards without billable demands are now ready to be merged and matched mechanically on the Collator. This machine has two card feed hoppers and four outlet pockets. Master cards are placed in the primary card hopper and processing cards in the secondary card hopper. The machine selects the master card, if the detail card in the other hopper falls within the same consumption range and pro-rated period. Master cards enter the merged outlet pocket followed by the blue processing card



or cards. Then the next master card feeds through automatically, followed by the blue processing cards. If no blue processing card is present for any one master card, this card is automatically selected into another outlet pocket. If a master card is misfiled, all blue processing cards within the consumption range and pro-rated period of the missing master card are automatically selected into a separate outlet pocket, indicating to the operator that a master card has been misfiled.

When the two groups have been merged and selected, the merged cards are run through the Reproducing Machine to gang punch the information already punched in the master block card to the succeeding individual blue processing cards, punching energy rate, fuel rate and plus factor. As each new block master card comes into position, the punching stops for the block master card to automatically change the set-up in the machine for the succeeding blue processing cards. This operation continues automatically until all of the cards have passed through the machine. The block master cards are then withdrawn and filed.

All blue processing cards which have been processed up to this point are run through the Horizontal Sorting Machine which separates them into two groups, i.e., tax exempt cards and non-exempt cards. The tax exempt cards are run through the Multiplying Punch which computes the commodity charge and holds it in the machine's counter while the machine computes the fuel charge and cross adds the commodity charge, the fuel charge and the pre-determined add factor, the result being the total commodity charge.

Two operations are necessary for the taxable blue processing cards. The first operation is calculated in the same manner as the non-taxable processing cards, except that the total amount of the first operation is punched into columns 11 to 16. In order to explain the second operation, it is necessary to be familiar with the preparation of the three tax master cards.

City Sales Tax Schedule

$ .00	to	$ .16	No tax
.17	to	.66	$.01
.67	to	1.16	.02
1.17	to	1.66	.03
1.67	to	2.16	.04

The tax continues to rise two cents with each additional dollar, an increase of one cent occurring at 17 cents and 67 cents respectively above each dollar. The three tax master cards are manually key punched (see Exhibit 5).

Card 1 is punched in columns 15 and 16 with two zeros for the purpose of sorting with the processing card. Column 79 is punched "2," to be used as a multiplying factor in the multiplying punch for arriving at the tax charge for the total amount of the bill, exclusive of the cents, and column 80 is punched zero, to account for the cents in the bill not exceeding 16 cents, because no tax is levied for 00 to 16 cents. Card 2 is punched "17" in columns 15 and 16 for sorting purposes, "2" in column 79, and column 80 is punched "1" for blue processing cards having amounts ending in 17 to 66 cents; column 80 is used always as an add factor. Card 3 is punched "67" in columns 15 and 16, "2" in column 79 and column 80 is punched with a "2" to be used as the add factor for bills ending in 67 to 99 cents.

Master tax cards are placed in front of the processing cards and run through the sorter; two sorts are made on columns 15 to 16. After these sorts, the first master card is followed by all blue processing cards having cents amounts ending in 00 to 16 cents inclusive, the second master card is followed by all cards ending in 17 to 66 cents, and the third master card is followed by processing cards ending in 67 to 99 cents. All cards in this order are run through the Multiplying Punch to calculate and punch the tax and the total amount including the tax. The first tax master card entering the machine sets up the mechanism from columns 79 and 80 for all succeeding blue processing cards and does not change until the next master card enters. When the first blue processing card enters the machine, the multiplier multiplies the dollar amount (less cents), previously punched in columns 11 to 14 by the "2", set up in the machine from the master card. This amount is registered in a counter of the machine and to this amount is added the amount previously punched in the blue processing card during the first operation and this total charge, including tax, is automatically punched to the blue processing card columns 75 to 80 and the tax amount alone to columns 71 to 74. When the second and third master cards enter the machine, the operation is the same as the first, except that when the second master card enters the machine, a plus factor of one-cent is set up to add to the amount registered in a counter for blue processing cards ending in 17 to 66 cents, the third master card sets up a "2" from column 80, for blue processing cards ending in 67 to 99 cents. This completes two sets of blue processing cards—taxable and non-taxable.

All blue processing cards are next run through the Horizontal Sorting Machine which sorts them into energy, demand steps, and multiplying factor groups. They are then run through a printing tabulator machine which lists and totals all of the mathematical computations thus far made and also verifies that the correct master cards have been used. In this step, the bulk proof is a manual operation. Exhibit No. 6 shows the listing which is produced as the result of running the completed blue processing cards through the Printing Tabulator. In this manual operation, the total kilowatt-hours, as shown on the listing, are multiplied manually by the applicable rate step and to this result are added the plus or add factor, fuel charge and tax, the total having to agree with the final total shown under the "amount column" on the listing sheet. Also at this time, the accuracy of the add or plus factor used in the bulk proof is manually verified in the manner indicated on this exhibit. This assures the complete accuracy of the entire extending operation.

The blue processing cards and the billing cards are then run through a Reproducing Gang Punch Machine which punches into the billing cards all of the required billing results, i.e., fuel, tax and total amount, which have been developed in the blue processing cards. This operation is automatically machine-compared to assure that the account numbers on the blue processing cards and those on the billing cards match identically.

The completed billing cards, the address cards and any unpaid accounts receivable cards are then run through the Alphabetic Tabulating Biller which produces the completed bills in the normal billing operation.

The application of the multiplying punch together with the various mathematical shortcuts in conjunction with the use of bulk master cards as applied to irregular billing periods is believed to involve several unique features of interest to the public utility industry. The successful development of this operation demonstrated the complete flexibility of tabulating card accounting and the increasingly wider ranges of usage to which it can be put in mechanizing billing and related operations.

In this case, it eliminated the necessity of the manual calculation of irregular period bills and greatly lessened the possibilities of errors attributable to the human element. It effected a sizable reduction in the number of personnel required to perform the irregular billing operations and thereby released these employees for assignment to other duties where their services were required. It also further improved an already rapid operation for completing customers' bills in less time than we have been able to do under any other method of billing of which we have any knowledge.

"Firsts"

● Cooking is one of the oldest of the arts and changes in cooking are more apt to come by evolution than by revolution. When better cooking devices are made, it will be the gas range manufacturers who will make them, as evidenced by the fact that gas ranges were the first to be built in the table-top style so universal today, first to offer the divided cooking top and the other convenient burner arrangements which are earmarks of a modern range, first to use heat-proof oven door glass with illuminated oven interiors and first in many other useful conveniences that have advanced the art of range making.

The research being conducted by the A. G. A. and the manufacturers today is aimed at maintaining that leading pace, so that Mrs. America will continue to be first to get new kitchen comforts in gas ranges built to "CP" standards!

—PAUL I. BERNO, Tappan Stove Co., at the A. G. A. Home Service Workshop

Residential Gas Section

WALLACE M. CHAMBERLAIN, Chairman C. S. STACKPOLE, Vice-Chairman F. W. WILLIAMS, Secretary

Background for "Automatic" Sales

BY J. W. LEA

Chairman, Domestic Range Committee
American Gas Association

HOW many of your present day organizations can tell a clean-cut sales-slanted story explaining the automatic gas range built to "CP" standards? Can you do it?

The gas industry has been blessed with probably more than its share of big men—men of vision, men of action. A group of men of this type got together back in 1937. Electric ranges were beginning to come along faster and faster. It has always seemed to me that here was a time when failure could have been final. But these men did not fail. They labored long and earnestly. They labored efficiently, and the "CP" standards for gas ranges were born. Frank Houston of Rochester has been accorded great honor for the large part he played in the organization and putting into effect of that first "CP" program. It seems to me that it wouldn't be at all out of place if every gas man when he gets up in the morning would face toward Rochester and say, "Bless Frank Houston and his associates, who did not fail."

Inevitable Skeptics

Through the intervening years and even now there have been those who did not go along with Frank Houston. They honestly believed for instance that the competition from quality electric ranges could be met best by selling lower and lower-priced gas ranges. Many of you will recall the last days of the Model T. Chevrolet and other manufacturers were building big car quality and big car convenience into their light cars. Ford continued to sell the Model "T," but there came a day when the public stopped buying Model "T's" just because they were cheap. Ford saved the day with the Model "A" and now the 1947 Ford has the quality and the convenience items that keep it up with the other leaders.

Then there have been those who have said that this range is like a "CP" except for automatic ignition. Soon there will be those who will say, this range is just like a "CP" except for automatic time control. Then we have a certain group who say, "Why try to sell automatic ranges, people won't buy them and even if they do they will never use them."

I recall an article in the *Saturday Evening Post* a number of years ago which made a deep impression on me. I have never forgotten the unchanging principle which it drove home. "Nature Beckons With a Finger Dipped in Gold" was the title. Bees are attracted to flowers by lovely colors and odors, thereby carrying on pollenization and so it goes. An automatic gas range built to "CP" specifications is the gold-tipped finger with which we are going to beckon to our customers.

The "CP" program progressed slowly at first—not by a jugful was every range sold built to "CP" standards—but progress was made. Men like Bob Agee, John Bogan and now Jim Gorton of the Gas Appliance Manufacturers Association and Frank Williams of the American Gas Association, have kept telling the story of "CP" from one end of the country to the other. The average quality of gas ranges kept climbing until gas companies and dealers alike were selling ranges at $25 to $50 more per range than ever before.

Today in this territory there are literally thousands of homes without cooks, maids or butlers. Women who never did cook before are having it to do now and they are doing a good job, too. These women are looking for ways and means to spread themselves over more work. There's shopping to be done. Most of them want to find time still to dig around in the flower garden a few minutes every day. The finger dipped in gold to beckon to hardworking housewives today is the word "automatic"—automatic gas ranges built to "CP" specifications.

Thousands of outmoded gas ranges in our territory today are sitting ducks for the automatic cooking story our competition is now telling. Have you examined the pages of women's magazines lately? Ad after ad says cook automatically with a cold-top or some other kind of electric range. After they have paid a hundred dollars just to get the thing installed it's going to take a long time to get it out again, even when they find out the drawbacks to cooking electrically.

Automatic performance is the heart of "CP" just as the "CP" model is the heart of the New Freedom Gas Kitchen. Let's beckon to our prospects with a finger dipped in "automaticity." Even if a good many of them don't buy "CP" models they will still be sold a good quality of gas range. Again there will be those who say, "Let's not sell automatic ranges, they will give us a lot of service headaches." I say that if you don't sell them we won't have any service calls at all. People don't call us to service our competitor's ranges.

Let's refresh our memory a bit on this business of "CP." You know there really isn't any such things as a "'CP' range." There is a manufacturer's brand name gas range built to "CP" standards. We should always sell a brand name range first, and "CP" second. "CP" must not be allowed to supercede the brand name. The leading manufacturers of gas ranges are doing an outstanding job in staying up at the front line of this competitive battle with us—feeding us the latest and best type of ammunition so that we can hold on to our position in the cooking field. Approximately half of the 1.8 million gas ranges sold in 1946 were produced by the "CP" manufacturers group. In January of this year 183,000 gas ranges were produced. This equals an annual production rate of 2.3 million and more "CP" models proportionately than last year. We should reciprocate at every opportunity by pushing brand names along with our "CP" promotions.

Gas range manufacturers have been beset with the same kind of production difficulties as other manufacturers. It seems to me, however, that the better quality ranges have fewer of the small annoying slips that get by inspectors in various plants. There has been a definite shortage of pilots, valves and other parts to make up "CP" models. Consequently

Excerpts from paper presented at Southern Gas Association Convention, Biloxi, Miss., April 18.

Convention Speaker

● **Frank C. Smith, a prominent leader in the gas industry and president, Houston Natural Gas Corp., will deliver one of the feature talks at the Residential Section meeting during the American Gas Association's October Convention. Mr. Smith will speak on "What About Gas All-Year Air Conditioning?" at the October 6 afternoon session. Other well-known speakers are being scheduled to cover a variety of timely and interesting topics.**

none of us has been able up to now to get as large a proportion of "CP" models as we would like. There has been though, a steady enough supply of ranges built to "CP" standards to warrant a good strong start in their promotion.

"CP" standards have changed some since the war ended. They have been revised to give manufacturers some breathing room so that they can be free to design and build the very best performing cooking machine possible. Emphasis is on performance as never before—automatic performance. "CP" standards have not been lowered, but they have been broadened. Something new has been added. Requirements have been reviewed by manufacturers, utilities, home economists and other cooking experts to make sure that our customers are provided with the last word in performance and convenience. Now there are 17 points as against the old 22 points.*

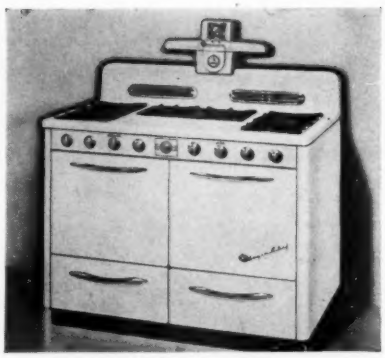
Today there are 23,749,000 homes in the U. S. and Canada using gas for cooking. Conservatively 12.5 million of these ranges are obsolete. Many are completely worn out. Are we going to replace them or is someone else? Any gas company which has not made some sort of start toward building up this replacement market has already lost a certain percentage of its customers, and the longer we wait the greater the loss. Several million new homes will be built this year. This also is our problem. How many of these will cook with gas?

In a very short time we shall have a full flow of appliances. Competition will be keener than we have ever known before. That's good—that's healthy. The "CP" program is made to measure for intense, constructive, competitive effort. Use this program to the limit. Let's beckon our prospects to the joys and satisfactions of gas cooking with a big energetic finger dipped deeply in the gold of "Automatic Performance."

Ed. Note:—Today the Keynote is "Gas Has Got It."

* April 1947 A. G. A. Monthly, p. 170.

De luxe model in 1948 line of Tappan ranges



Latest model Magic Chef automatic gas range

Magic Chef Displays New Gas Range

AUTOMATIC clock control, a six-burner top-of-stove arrangement and larger capacity throughout are major features of the new Magic Chef gas range now being shown in appliance showrooms throughout the country.

The range has the one-piece turret top to simplify cleaning and fits into any kitchen arrangement. It possesses four regular, non-clogging burners and two giant burners providing extra cooking capacity for special occasions. Other features include waist-high Swing-Out broiler and enlarged oven with room for largest turkey or four large cake layers.

New Window and Store Display Bulletin Out

THE American Gas Association has published the latest issue, Volume 24, of the Window and Store Display Bulletin for the gas industry.

In connection with the all-out automatic gas range publicity and promotional program "Gas Has Got It," the next issue of the bulletin will include photographs and descriptions of tie-in displays prepared for the advertising campaign.

R. J. Karcher, Michigan Consolidated Gas Co., Detroit, is chairman of the Window and Store Display Committee.

Tappan Shows Eight 1948 Range Models

EIGHT new models of the 1948 line of Tappan gas ranges were given their first public showing during the July Furniture Mart show in Chicago.

The company's de luxe model included automatic oven control, concealed oven venting and dial controls, top burner valve indicator lights and Pyroglas plates. Giant burners, striped glass window in oven door, lock-type simmer valves, non-tilting racks and silent ball bearing broiler drawer were among features of the various 1948 models.

Residential Section Committees Report

A BRIEF review of gas appliance financing and a summary of selected plans available on a national basis are included in a newly published report of the Appliance Financing Committee of the Residential Section, American Gas Association. H. W. Nichols, Rochester Gas and Electric Corp., chairman. The bulletin is intended particularly for the information of gas companies which do not have available local financing facilities for company and dealer sales.

Concurrently the Dealer Relations Committee of the A. G. A. Residential Section published its new report discussing dealer participation as a means of maintaining and increasing the domestic gas load. The interim bulletin contains a composite dealer participation plan for the information and review of the gas industry. H. S. Christman, The Philadelphia Gas Works Co., is committee chairman.

"Kitchen on Wheels" Stars in Hollywood

A NOVEL, mobile kitchen service employing gas equipment has proved such a distinct success at Republic Studios in the San Fernando Valley during the past year that the studio has proudly photographed its leading stars using this "Kitchen on Wheels."

The equipment consists of a gas range, gas refrigerator and a sink unit, all mounted on a 12-foot dolly. When a food or eating sequence arises during the filming of a picture the "Kitchen on Wheels" takes the limelight. The dolly is wheeled up on stage, plugged in very simply to flexible gas and water connections and is ready to go.

Individually or together the appliances have held many leading parts in actual kitchen scenes. Innumerable gallons of coffee have been brewed and served from this handy unit.

Catherine McLeod, Republic Pictures star, tries out modern automatic gas range installed in Hollywood's "Kitchen on Wheels"

Industrial Gas Sales Tools

BY STANTON T. OLINGER

Supervisor, Industrial Gas Engineering
The Cincinnati Gas & Electric Co.,
Cincinnati, Ohio

THE basic principle of selling any commodity is the same and the basic methods used by a successful salesman are the same. The tools vary with the product and their application has to be varied with the individual job.

This job of being an industrial gas sales engineer is primarily different from the average selling job only in that it requires more knowledge. You need not only know the general policy of your company and the type of gas that you are distributing, but also its application to industry.

You are going to succeed or fail, not so much on how good your gas service is, but on the impression implanted in the minds of your customers. What they think is the important point and not so much what the facts are. If they think gas is unreliable you're sunk.

You've never had a bigger sales job. For example, take the lack of gas of the past winter. Was it due to a gas shortage? Absolutely not. It was due to a steel shortage—the same that has plagued all your customers since the end of the war. Have you been telling your customers that? Or have you been slurring it over?

You gentlemen are industrial gas salesmen, or more properly, industrial gas sales engineers. Two things your job calls for which are in many respects the antithesis of each other.

Selling is an art, while engineering is a science; thus accounting for the conflict and explaining why careful search is needed to find a man with both temperaments. You have been hired and trained to put industrial gas loads on the line and keep them there. Your engineering training and ability comes into play with your customer. The better engineer you are, the better job you can do for him in seeing that he buys the best equipment for needs and for his dollar. This is how engineering becomes one of your selling tools.

Abstract of talk presented at A. G. A. Industrial Gas School, Columbus, O., May 5-9.

Cincinnati utility's window series featured interesting processes in manufacturing

Let me make a list of these selling tools. Here they are:

A. Tools to secure attention.
   1. YOUR ENTHUSIASM.
   2. Activity in customers' technical societies.
   3. Trade magazines.
   4. Engineering service.
   5. Advertising.
   6. Your company's reputation.

B. Tools to hold attention.
   1. Manufacturers' catalogs and representatives.
   2. American Gas Association.
   3. Handbooks, etc.

C. Tools to close sale.
   1. Test data.
   2. Testimonials.
   3. Proposals.

Selling industrial gas differs from other direct selling in that you can't show your customer the gas and if you could he wouldn't be interested because what you are selling is a service that he wants, at least after you have done a selling job on him.

The first thing any salesman must do when he sets out to make a sale is first to put himself in tune or vibration or frame of mind with the customer and then gradually swing the trend of ideas to the channel he wants them to take. How do you put yourself in tune with him? One way is to agree. A second way is to make personal friends. Join his clubs, if you can—take an active part in his technical societies—be an asset to them and a worker. Read the trade magazines of your principal customers. Any man likes to discuss his job.

So hardly realizing it, we have covered two more tools in your kit:

1. Activities in your customer's technical societies.
2. Reading trade publications.

The fourth section of selling tools is engineering service. Ask any industrial gas engineer with a number of years experience, how many times he has been stymied in a plant and then by some chance perhaps was able to do an engineering service for the customer. He probably made a friend for life, and from then on had free access and a ready hearing for his ideas.

All plants, particularly the small and medium sized plants, cannot afford a competent fuel engineer. Here's a situation made to order for you. The immediate cause of a call may be a high bill—a furnace that won't heat or can't be lit—a solution tank that takes forever to heat up, or a million and one things that give a plant manager gray hair.

Most of your industrial departments have orsats, velometers, potentiometers, dew point indicators, etc. Be sure you know how to operate them and know how to interpret results.

Be a good engineer and the customers will be your friends.

The fifth tool in your kit, to secure interest, is advertising. National advertising in trade magazines is sponsored by the American Gas Association. This valuable service has been growing and the list of national trade magazines containing these ads is larger each year. Here is an opportunity for you to help the industry. If an interesting job comes up among your customers, secure the details and some pictures, send these to the A. G. A. They will publish them in an appropriate magazine.

Possibly your company has a show window that you can use. Several years ago we ran a series of windows on the use of gas in industry in Cincinnati. We would take a number of pictures in the plant showing not only gas-fired equipment, but also interesting processes in manufacturing. We then secured samples of the work in various stages of manufacture. These were assembled with appropriate backgrounds and descriptive cards. These windows were left on display on an average of three weeks. Several windows attracted enough attention to receive notice in the local newspapers, particularly a window of a jail builder. This firm had built the cell blocks at Alcatraz, and the background featured a large blow-up picture of Alcatraz. In addition there was a small model of a cell block. Enough to say it stopped traffic.

Last of the selling tools that will help you in securing a favorable hearing is your company's reputation.

There is nothing that makes your path easier than the general reputation of your companies for fair dealing. You may think you can do nothing about this but you can and do every time you interview a customer or prospect. You are the company as far as that contact is concerned and if you approach each problem in a spirit of helpfulness it will further build your companies' good reputation.

Now we need tools to create continued attention by your customer. To secure this we need a thorough knowledge of our product and its application to the thousand and one uses found in industrial gas.

CONTROLLED by VALVES
Gas helps build the valves that control the operation of
INDUSTRY & COMMERCE
GAS helps bring a higher living standard

Appropriate backgrounds and samples of work in various stages can dress-up a window

No one tool in this class will prove more valuable than association with the manufacturer's representatives. These men, in conjunction with their catalogs and literature, are one of your most valuable tools. Each manufacturer, who wishes to put his equipment on the market realizes that he must furnish complete information, and some of these catalogs are practically handbooks in themselves. Study these catalogs, showing the different types of burners and equipment, until you know where to find any particular burner, inspirator or boiler without having to hunt through the whole catalog.

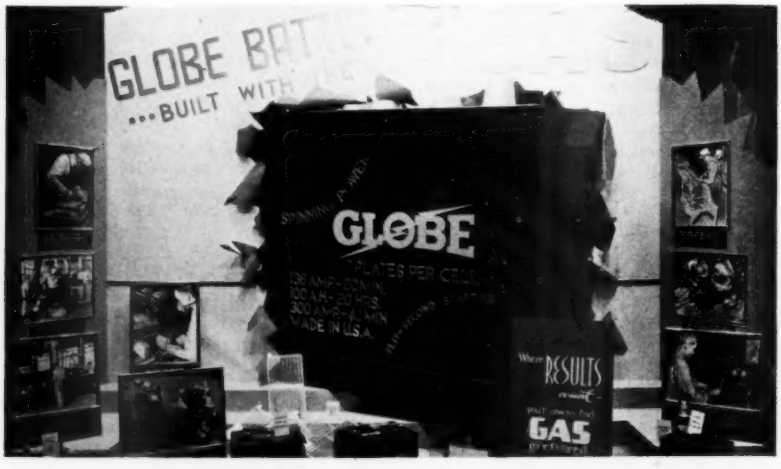
Know how to use the capacity charts which most manufacturers give you, showing the capacity of equipment at various gas and air pressures. Make these catalogs your bible, your source of information. Of all the tools in the hand of the industrial gas engineer, catalogs are probably the most important. Build your catalog file and understand them thoroughly. It is equally important that you know and talk to the manufacturers' representatives. These men know the answers to the problems that you meet. Where you have one job of a particular kind, he will have run across a similar situation a dozen times in as many cities. I mean particularly the man who is a direct sales representative of the manufacturer. Make this man your friend and your sales will show the result. Whenever it is possible I would suggest your calling on the customer in the company of this man, as you are both working for the same end, and particularly if you have not been in this work long.

The second tool, in this second class in holding attention and securing interest, is your own A. G. A. Here have gathered the kindred spirits who all have one aim—promotion of the gas industry. The Association publishes magazines, advertises, conducts experimental research, prepares and presents papers and publishes handbooks for all of you. Join the A. G. A. at once if you have not already done so and take as active a part as possible in its activities. When an interesting job comes up in your territory, write a paper about it, your boss will back you up in this, I wager—it will give your customer some free advertising, give your industry a new idea and give you and your company publicity.

Read your own trade magazines to see how the rest of the industry is progressing. A salesman *must* be enthusiastic about his work and a fine way to increase this enthusiasm is to know the background history and current happenings in his industry.

We have now reached the closing portion of our sale and the one that determines whether you get the job or not. We have secured the customer's attention—we have created interest, but all this will be in vain if we do not close the sale.

You must convince your customer that the gas equipment or burners will enable him to do a better job than his present equipment—that his rejects will be reduced—that he can make more money by doing as you suggest—in other words, what you are offering him is of more value than his money.



Attractive display windows such as this one will draw attention to industrial gas uses

One important thing to remember in closing a sale—you must make it easier for the customer to say "yes" than "no."

One very convincing argument is test data. But maybe tests cannot be run. If not, arrange to take the customer to a similar plant and talk to them. If you have already sold them you have a real ally. This other man is bound to advance your ideas to show, if nothing else, how smart he was in putting it in. Or maybe you can get him to write a letter that you can show to your prospect.

One very important point—never give out test data from one plant to another unless you have definite permission to do so.

If a proposal is required to close a sale, have it ready some time before you think the customer is ready to sign. Maybe he doesn't need any pushing—let him sign when he wants to—a sale can be lost by hanging on too long. Always be ready to close a sale any time the customer is ready.

Listen to your customer—let him talk—he may sell himself, and it is to your advantage to let him talk, if along the line in which you are interested.

Largest A. G. A. Metal Show Exhibit Planned

THE American Gas Association combined exhibit at the National Metal Exposition and Congress to be held in the International Amphitheatre, Chicago, October 18-24, will be the largest and most comprehensive gas exhibit ever sponsored by the Association. With 12 nationally known concerns cooperating, it will be the largest single exhibit in the gigantic Metal Show and will occupy practically an entire end of the main exhibit area.

In keeping with the importance of this annual exhibition, the traditional Industrial Gas Breakfast will be held Wednesday morning, October 22, at the Hotel Stevens. The guest speaker will be Gerald E. Stedman, widely known writer on industrial heating subjects. Together with the magazine editors who will attend the breakfast, industrial gas men and industrial heating equipment manufacturers should find Mr. Stedman's talk both interesting and inspiring. The annual breakfast is one of the best-attended functions during Metal Show week and is considered a highlight of the gas industry activities.

New Development Aids Gas-Diesel Engine

AN engineering achievement described as reducing by as much as 72 percent the fuel cost of engines burning Diesel oil and natural gas, has been announced by Ralph L. Boyer, vice-president and chief engineer, Cooper-Bessemer Corporation.

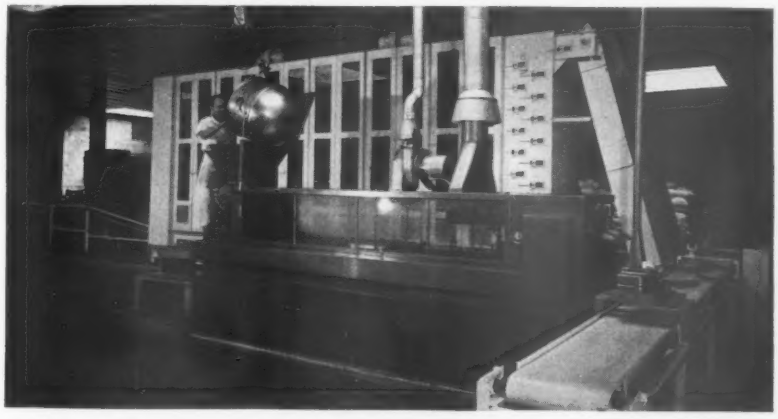
Immediate effect, he added, will be to materially increase gas-Diesel acceptance by municipal power plants, sewage plants and many industrial power operations. It will also offset increases in the cost of these fuels brought about by temporary equipment shortage.

Section Plans Convention Program

THE program for the Industrial and Commercial Gas Section at the American Gas Association's annual convention in Cleveland will be held on Tuesday afternoon, October 7, in the Assembly Room of the Hollenden Hotel. One of the industry's outstanding speakers, Louis Ruthenberg, president, Servel Inc., will address guests, executives, gas men and manufacturers at the opening luncheon.

Following the luncheon, four important subjects will be discussed by leaders in their respective fields. Franklin T. Rainey, general sales manager, The Ohio Fuel Gas Company, Columbus, will speak on "Maintaining Good Relations During Critical Times." The subject, "Looking Ahead in the Fuels Supply," will be presented by Ralph A. Sherman of Battelle Memorial Institute, Columbus, Ohio. Two other timely subjects will be "American Eats Out" and "Industry Advances Through Research."

Tasty Doughnuts Fried by Gas



THE speed and efficiency of gas and gas-fired equipment are utilized by Fluffy-Egg Baked Products, Inc., Brooklyn.

The concern has installed an automatic doughnut maker with a capacity of 500 dozen an hour. First reported by The Brooklyn Union Gas Co., the machine automatically cuts, scales, sizes, shapes, floats, cooks, turns over and delivers uniformly delicious, golden brown doughnuts. Moreover, it will add 432,000 cubic feet of annual gas consumption to the utility's lines.

Food Service Projects Reported

Chairmen of Food Service Equipment subcommittees meeting at A. G. A. headquarters recently to discuss plans for completion of their various projects. Seated, l. to r.: J. A. Rockefeller, Newark, N. J., New Trends; Roy E. Wright, Cambridge, Mass., Sales Training; Walter S. Anderson, Boston, representing L. J. Fretwell, Tulsa, Appliance Improvement. Standing: John J. Bourke, director, A. G. A. Commercial Gas Cooking Promotion; Charles F. Sevenoaks, New York, Restaurant Sanitation; E. V. Fineran, Washington, D. C., Sales Promotion; M. A. Combs, secretary, Industrial and Commercial Gas Section

Technical Section

C. S. GOLDSMITH, Chairman | A. C. CHERRY, Vice-Chairman | A. GORDON KING, Secretary

European Meter Shop Practices

BY L. A. DIXON, JR.

Pittsburgh Equitable Meter Co., Du Bois, Pa.

IN order to understand meter practices as I found them on the other side of the Atlantic, it is necessary to know that almost all distribution systems over there are low pressure. In some cases the gas comes from the holders to the mains at approximately six inches of water column pressure, and is delivered to the customer at two inches minimum. Recognizing that with such low pressures pressure absorption in the meter is very important, the governments of England and France made rulings that a domestic meter must pass its rated capacity absorbing no more than 0.5 inches water column pressure. These rulings superseded all others which had previously set the physical dimensions of meters and speed.

The meter manufacturers with no restrictions other than pressure loss then designed much smaller meters with larger channels, lighter diaphragms, and much faster speeds, utilizing the open-top type construction. The present standard domestic meters in both England and France will pass their rated capacity at somewhat less than 0.2 inches water gauge pressure loss —running approximately 50 percent faster in England than those in our country, and in France, 100 percent faster.

In England the general design of the meters is nearly the same as those which are made in the United States. On the basis that the fewer the gas passages the less the pressure loss, their meters are all of the open-top type with the crank mechanism enclosed and index enclosed between the gallery and the index box, which is of the puttied type. Their diaphragms are made of Indian or Persian sheepskins, are much thinner (0.5 mm.) than those generally used here, and since both sides of the hides are buffed and scraped, they are much more uniform in thickness and four times as costly. The diaphragms are mostly of the pan type and would be treated with oils the same as our own if they could get what oils they want.

The manufacturing of the meters is done in much the same manner as here at home, except that in the testing operations the meters are tested with vacuum instead of pressure because of the open-top construction.

During the war they were only forced to use 40 percent tin solder and immediately after the end of hostilities went back to 50 percent tin solder. The tin plate has a coating of eight to ten pounds per base box, which is much heavier coating than we could buy in America even before the war. In this country, we use 3.25 pounds per base box.

The standard 100 cubic feet per hour meter sells for approximately $15 delivered, plus prepay attachments and any other extras specified.

Meter repairing in England is carried on almost entirely by the meter manufacturers who have small plants located near the gas companies. Again the work is done very much as we do it except that the output per man per day is much less.

The government requires that meters be brought in for repair every ten years. In general, diaphragms are replaced after 20 years and the meter is condemned at the time of the fourth age change or when it is 40 years old.

A large part of the cost of repairing meters there is in cleaning and repairing the prepay attachments—80 percent of the meters in England are of the prepay type. Their attachments are much more elaborate than any I have ever seen in this country. They all work on either of two coins and they all must provide a warning before the gas goes out. Some prepay attachments are so made that they provide for a reduction in price as the quantity of gas used goes up.

The proof requirements in England are plus or minus two percent, consequently, little time is spent on testing which consists of passing 0.5 cubic foot of air through the meter at open flow and adjusting to come within the correct limits.

All meters, both new and repaired, must go to the government for sealing. This service costs the manufacturer, if a new meter, or the gas company, if a repair me-

Presented at A. G. A. Distribution Conference in Cleveland, Ohio, April 14-16, following the author's recent trip to Europe.

Varied Convention Program Scheduled

A WIDE assortment of interesting and timely papers is indicated by the tentative program for the Technical Section's contributions to the October Convention in Cleveland.

The Section will be represented during the general sessions by a speaker on industrial relations at the Wednesday morning meeting. The Technical meetings will open Monday afternoon with a talk by C. S. Goldsmith, Section chairman, after which Hudson W. Reed, first vice-president, American Gas Association, will address the delegates.

Other features of the Monday afternoon meeting will be a talk on "The Objectives of the Meter Engineer," a report by the motor Vehicle Committee, and a paper entitled "Handling and Storage of LP Products," by A. B. Lauderbaugh, The Manufacturers Light & Heat Co., Pittsburgh.

The Tuesday afternoon joint meeting with the Manufactured Gas Department will commence with a talk by H. H. Cuthrell, vice-president, The Brooklyn Union Gas Co., on what the natural gas industry can do to help the manufactured gas industry, or a related subject. Following a report of the Distribution Committee, E. S. Pettyjohn, director, Institute of Gas Technology, Chicago, will speak on the broad subject of potentialities in the extension or augmentation of utility gas service. A report by the Chemical Committee and a paper by A. D. Harrison, The Brooklyn Union Gas Co., on "Steam Generation at 600 p.s.i. 700° F as Applied to Carburetted Water Gas Plant," are on the meeting agenda.

The Section's final meeting on Wednesday afternoon will be highlighted by a report of the Nominating Committee, election of officers and remarks of the chairman-elect.

Features will include "A Method of Testing the Adequacy of Gas Distribution Systems" by John J. Pugh, Pacific Gas & Electric Co., San Francisco; a report of the Gas Production Committee, an address by Harry O. Mathews, fleet operations manager, Standard Brands Inc., and a paper, "Economics of B.t.u. Storage," by Eric A. Flaschar, manager, Stacey-Dresser Engineering.

ter, the English equivalent of 60 cents per meter, plus the traveling to and from the government testing station.

In France, because of the leather shortage they are only making wet meters, the liquid used is a light oil. These meters are made of heavily coated terne metal. During the war and the German occupation, they were forced to use 50-50 solder, but as soon as the Germans left in August, 1944, they went back to using 60 percent tin, 40 percent lead solder.

The use of acid flux in both England and France surprised me, but it does not seem to bother them with excessive corrosion.

The French are in the process of bringing out a small poppet valve, single diaphragm meter which will be cheap enough that the gas company can throw it away after ten years instead of repairing it. Although the small domestic meters now in service there are all of the slide valve type, the government-controlled gas company likes the poppet valve type because it enables the customer to hear a leak when all outlets are turned off.

The French equivalent of a 100 cubic feet per hour meter sells for $18.60 delivered, plus any extras such as prepay attachments, etc.

Both the English and the French talk sizes of meters just as we do: five Lite, ten Lite, etc., but over there, they use these names for a group rather than for a specific meter.

The English meters are badged D-100, D-200, D-400—the numbers being the capacity. The French use trade names like Rex 1, Beta 2, which are no indication of either size or type.

Utilities Radio Group Expanding

AT a recent meeting in New York of the Power Utilities' Radio Communication Systems Committee, which constitutes Committee 4 of the Radio Technical Planning Board Panel 13, reports were received from various representatives that associated regional co-ordinating groups were now either organized or in process of organization in all sections of the country. The organization of regional groups has been fostered by the national committee which issued a "Generalized Plan for the Formation and Operation of Regional Utility Radio Co-ordination Groups" about two months ago (copies of this report are available on request to W. T. Smith, Room 2650, 420 Lexington Avenue, New York 17, N. Y.).

All groups are so constituted that representatives of petroleum pipeline operators who are eligible under Federal Communication Commission rules to use the same frequencies as are available to power utilities, are welcome to participate with power utility representatives. This policy of direct co-ordination at local levels was agreed to be mutually advantageous at a joint meeting of representatives of the power utilities and of the petroleum pipeline operators in Chicago, June 4-5, 1947.

The successful future operation of utility radio systems will largely depend upon close co-operation among all licensees in this class of service, which includes electric, gas, water, and steam utilities and petroleum pipeline operators. It is the function of these regional groups to promote this co-operation in various areas on such matters as the selection of operating frequencies so as to avoid interference. It is understood the F.C.C. will recognize the objectives of these groups by requesting each future applicant for a license to operate on a power utility frequency to secure a recommendation from the appropriate regional co-ordinating group as to the specific frequency which should be used.

Companies contemplating the use of radio in their system operations should get in touch with their local regional co-ordinating group for further information. Companies now using radio will also find such contact worthwhile, particularly as regards their plans to shift from their present temporary frequency to a permanent one.

Listed below are regional groups now operating, together with the name of the chairman and also the committee member:

"Utility Radio Association of New England" (covering Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut)—R. W. Lewis, Boston Edison Co., chairman; contact W. C. Phillips, New England Power Service Co., 441 Stuart Street, Boston 16.

"Middle Atlantic Utility Radio Association" (covering New York, New Jersey, Pennsylvania east of the Alleghanies, Delaware, Maryland and the District of Columbia)—G. F. Schiffmayer, Public Service Electric & Gas Co., Newark, N. J., chairman;

Progress Through Research

IF the United States ever runs out of petroleum and gas it will make both from coal.

This confident prediction is currently the standard reply to alarmist cries that we should husband our wasting and irreplaceable natural resources. It is made with confidence because our petrochemical industry has already performed similar marvels and the basic processes for this one are well understood.

With equal confidence it is assumed that when this time comes it will be done by the oil and natural gas industries rather than by the coal and manufactured gas industries. This assumption is equally well-founded because of the petroleum industry's record of progress through research.

This was strikingly brought out during the natural gas investigation by the Federal Power Commission, which showed that the oil industry is spending more than $100 million annually for research and development (exclusive of petroleum exploration). With a production at that time of 1.7 billion barrels, or 260 million tons, and a refinery value of 3.5 billion dollars, its research budget is three percent of its total income, or 40 cents per ton. Still greater expenditures in oil research are assured.

By contrast, the combined coal and coke industries, marketing 700 million tons with a wholesale value of four billion dollars, spends only $3 million annually for research (aside from materials-handling equipment), which is 0.4 cent a ton or 0.001 percent of sales.

Small wonder that the commission observes that the coal and manufactured gas industries have attempted to resist competition by rear-guard defensive actions which offer no real salvation. The petroleum-refining industry, through its research, has continually lowered its costs, improved its products, and increased the efficiency of utilization by its customers, along with a steady expansion in output.

One coal company, realizing that it was at the tail end of the progress parade of American industries generally has now begun a research project on gasification and liquefaction of coal, but it is noteworthy that it called on an oil company to join it. However, it is unlikely that the coal industry can ever catch up on its research sufficiently to capture the synthetic-fuels business by the time there is economic justification for it.

As long as the oil industry continues its many research programs—and there is no hint that it will not—the American public can justifiably depend on the promise that synthetic fuels will be available if and when natural gas and petroleum peter out.

And it will be the oil industry rather than the coal industry which will do it because petroleum has always made progress through research.

—*Editorial reprinted from July 26* Oil and Gas Journal.

contact C. S. Young, Pennsylvania Power & Light Co., 901 Hamilton Street, Allentown, Pennsylvania.

"North Central States Power Utilities Radio Coordination Committee" (covering Pennsylvania west of the Alleghanies, Ohio, West Virginia, Indiana, Illinois, Michigan, Wisconsin, Kentucky)—R. W. Fackler, Indiana & Michigan Electric Co., South Bend, Ind., chairman; contact J. G. McKinley, West Penn Power Co., P. O. Box 1736, Pittsburgh.

"Utility Communications Association" (covering Iowa, Missouri, Nebraska, Kansas, Oklahoma, Arkansas)—J. G. Cavanaugh, Iowa Power & Light Co., Des Moines 3, chairman; contact H. W. Chew, Empire District Electric Co., Joplin, Missouri.

"Utilities Radio Coordinating Association of Texas" (covering Texas)—contact Paul Taylor, Central Power and Light Co., 120 Chaparral Street, Corpus Christi, Texas.

"Area B Radio Committee" (covering North and South Dakota and Minnesota)—contact M. K. Patterson, Minneapolis Gas Light Co., 739 Marquette Avenue, Minneapolis.

The American Gas Association representative on the committee is W. T. Bulla, Natural Gas Pipeline Co. of America, Chicago.

Information relative to regional groups and interim procedures in areas in process of organization may be secured from the following individuals:

For Virginia, North and South Carolina, Tennessee, Georgia, Florida, Alabama, Mississippi and Louisiana: T. G. Humphreys, Jr., Birmingham Gas Co., 1918 North First Avenue, Birmingham, Alabama.

For Washington, Oregon, Idaho, Montana and Wyoming*: W. A. Leidigh, Jr., Portland General Electric Co., 621 Southwest Alder St., Portland 5, Oregon.

For California, Nevada, Utah, Arizona, New Mexico* and Colorado*: C. T. Malloy, Southern California Edison Co., 601 West 5th St., Los Angeles 53, California.

Philadelphia Utility Wins P. U. A. A. Awards

FOR the fourth time in five consecutive years, the Philadelphia Electric Co., in competition with the nation's public utilities, won the national award for its public relations newspaper advertising. The competitions were sponsored by the Public Utilities Advertising Association, a department of the Advertising Federation of America.

In addition, the utility won an honorable mention for its annual report to stockholders and another honorable mention for printed booklet distributed during the past year.

New Britain Utility Ties-In With Movie

H. W. Rice, sales manager, The New Britain Gas Light Co., right, with theater manager and prize offered by utility in connection with movie "starring" modern gas kitchen

WHEN the Allied Artists production "It Happened On Fifth Avenue" arrived at the Strand Theater in New Britain, Conn., recently, The New Britain Gas Light Co. was ready with a tie-in campaign promoting the wonders of gas.

Newspaper advertisements tipped off the public: "See the riot of fun that happens in the kitchen—in 'It Happened on Fifth Avenue!' *Just* the kind of New Freedom Gas Kitchen *you'll* want to have!"

In conjunction with the showing of the film a new automatic gas range was exhibited in the theater lobby and presented free to a lucky ticket holder. Twenty-eight thousand of New Britain's 70,000 population saw the screen announcement during a two-weeks period and about the same number saw the range on display in the lobby where it was illuminated by three spotlights.

Promotion Aid For Water Heater Sales

A FOUR page sales aid released by Fenton Kelsey Co., publisher of the widely used "Cooking for Profit," should be of interest to gas companies who strive to tell the advantages of the gas automatic water heater to restaurant, hotel, and other commercial gas users.

The folder shows the dangers of poor sanitation, and what gas and gas equipment can do in providing automatic, inexpensive, quantities of hot water to eliminate this danger.

It is cleverly illustrated, attractively printed in two colors, and designed for use either as a direct mail aid or as a pass-out piece for salesmen or showroom use. Gas companies may have it imprinted with their company signature or have space set aside on the back page for their own localized message. If desired, mailing permits will be printed in prior to shipment.

Eastern Gas and Fuel Opens New Coal Mine

AS partial answer to the present shortage of available high volatile coal for coke and chemical plants of the United States, Eastern Gas and Fuel Associates will open a new by-product coal mine at the southern tip of Boone County, W. Va., Vice-President L. C. Campbell, head of the coal division, has announced.

The mine is scheduled to go into operation about October 1948, according to H. John Harper, assistant to the vice-president, who is in charge of developing the new project. Initial production is expected to employ about 300 miners and produce 2,000 tons a day, increasing as the mine is developed, to 4,000 tons of production a day with a proportionate increase in employment.

gas grapevine

Our gas zooprintendent out Chicago way reports that water for Mr. and Mrs. Crocodile has to be heated to just the right temperature. Gas also provides steam for the coils installed under Monkey Row as a protection against cold floors.

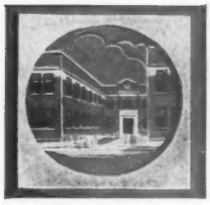
Here we go again. Portland (Oregon) Gas & Coke Co. is heading the west coast agitation for 180° water in public eating places. Betty's Cafe has just installed a gas booster heater to meet sanitation requirements for sterilizing hot water.

In a recent paper on dehydrating alfalfa and other farm products presented before the Mid-West Gas Association, the speaker mentioned a gas-fired sheep manure dehydrator and stated, quote, that the wear and tear on the dehydrator was greater than on the sheep. Its capacity of 412 tons of sheep manure daily is a lot of manure, unquote.

Brooklyn Union reports that Miguel L. Vera, of Cuba, who attended the A. G. A. Commercial Gas School in Washington, spent some time in their territory visiting large volume cooking installations, He was taken to several of Brooklyn's showplaces—and they do cook with gas out where the tree grows.

The A. G. A. scale model gas kitchen first exhibited at the 1947 Restaurant Show has been to the Illinois Restaurant Association, and is now in a prominent spot in the new showroom of Nathan Straus—Duparquet, New York. Its next appearance will be at the Indiana Gas Association early in October.

a.q.s.



Laboratories

ARTHUR F. BRIDGE, Chairman

R. M. CONNER, Director

Burner Design Bulletin Reprinted

RESEARCH Bulletin No. 10, "Research in Fundamentals of Atmospheric Gas Burner Design," has been reprinted and is again available from the American Gas Association Testing Laboratories.

First issued in 1940, the original issue became exhausted some time ago and demand from gas appliance engineers and gas company engineers has continued since then. Consequently, the Committee on Domestic Gas Research recently authorized its reprinting.

The bulletin contains nearly 200 pages and provides besides original work, burner design data on ranges and water heaters presented in previous bulletins. While the data presented cover primarily burners of the type commonly employed on gas ranges and water heaters, in many respects they are applicable to atmospheric burners used on nearly all types of domestic appliances.

The price of the reprinted Bulletin is $2.00 per copy. It can be secured directly from the A. G. A. Testing Laboratories.

Gas Purity Testing Device Patented

THE United States Patent Office has granted Earl J. Weber of the American Gas Association Testing Laboratories a patent on a gas purity testing device developed by Mr. Weber in the course of Laboratories war work.

The purity meter has been assigned to the Association and has possibilities of future application in the gas industry. With minor modifications it may help solve some of the problems encountered in the analysis of gases.

Originally developed for measuring the purity of helium, the device consists essentially of two bimetallic elements ingeniously employed to compensate for temperature changes and registering the purity of a gas upon a dial calibrated in percentage of purity upon the thermal conductivity principle. In its present form it can be used to detect the purity of hydrogen as well as helium. Its most significant feature is that it operates satisfactorily over a temperature range between minus 20 degrees Fahrenheit and plus 120 degrees without need of temperature corrections.

During the course of the Laboratories war work a score of separate devices and meters were designed and developed for the Army, Navy, Office of Scientific Research and Development, and such organizations as the Aero-Medical Laboratory at Wright Field. Most dramatic was the development of an automatic oxygen regulator for transport planes, serving up to 15 persons, which was widely used on the air route over the "Hump," India to China.

Filtering Research Report

A NEW research report on gum, dust and rust filtering for the protection of pilots and controls from stoppages is announced by the American Gas Association.

Sponsored by the Committee on Domestic Gas Research, the project was conducted and reported by the scientific firm of Arthur D. Little, Inc., Cambridge, Mass., under the supervision of the Technical Advisory Group for Burners, Controls and Accessories Research, Dr. Wm. R. Hainsworth, chairman.

The report was edited and published by the A. G. A. Testing Laboratories.

Laboratories Studying Gas Glow Tubes

A STUDY of small diameter high temperature gas glow tubes has been initiated at the American Gas Association Testing Laboratories under the sponsorship of the Committee on Industrial and Commercial Gas Research, Ralph L. Manier, Syracuse, N. Y., chairman. Purpose of the study is to determine the practicability of the use of small high temperature tubes and to chart design information and performance characteristics for such tubes under conditions of severe high temperature operation.

An experimental furnace about five feet long and tubular in design, for the obtainment of relatively constant test data of a uniform and reproducible nature, has been installed at the Laboratories. Silicon carbide tubes of three-inch inside diameter and smaller are being employed in the investigation.

Both the furnace and the tubes are fabricated in sections in order that both tube length and size may be varied and studied for performance and effectiveness. The furnace is being equipped with platinum-rhodium thermocouples for measurement of tube temperatures as well as suitable instrumentation for measuring gas and air flows and pressures and other data.

The experimental furnace contains an annular space surrounding the tubes, simulating industrial use for heating and heat treating purposes. This in turn is surrounded by 10.5 inches of refractory type insulation. Provision is made to vary the size of the annular space by the use of liners. Full length of tubes that can be studied is 48 inches. Among the factors to be analyzed is the maximum input in B.t.u. per cubic foot of combustion space which may be attained in small-sized glow tubes under conditions of practical operation.

While the gas industry has used small-size immersion tubes and small-size radiant tubes (up to 1,800°) there have been no small-size tubes available for high temperatures—up to 2,600°. This project is designed to fill that gap.

Karl Emmerling, general sales manager, The East Ohio Gas Co., Cleveland, is the project sponsor representing the Committee on Industrial and Commercial gas.

Experimental furnace developed for basic research work in small-size, high temperature gas glow tubes under A. G. A. industrial research project IGR-55. Means are provided for accurately loading furnace to duplicate furnace conditions up to 2,600°, as is full instrumentation. Furnace can be changed in length to use different length tubes and is also adjustable to accommodate different size tubes being studied in this project

Personal and Otherwise

Hanlan Retires After 53 Years of Service

J. P. Hanlan

JAMES P. HANLAN, retired on pension July 23 after more than 53 years with Public Service Electric and Gas Co., Newark, N. J., and predecessor companies. Mr. Hanlan was sales manager, gas, since 1935.

Starting in the utility business in 1893 as an office boy for the Hudson County Gas Co., a predecessor company, Mr. Hanlan worked his way up through the ranks as cashier, head of the collection department and agent, Hudson County District. Prior to that he was a lamp lighter for two years during the hours before and after school.

During the latter part of his career Mr. Hanlan was assistant to the vice-president in charge of sales and later assistant general sales manager, gas.

He has held the following positions in the gas industry: chairman, Residential Section of the American Gas Association; president and director of the New Jersey Gas Association; vice-president, Eastern States Gas Conference, and chairman A. G. A. New York-New Jersey Regional Gas Sales Conference.

Higgins Made Officer of Rockwell International

COLONEL A. E. HIGGINS has been named vice-president of the Rockwell International Corp., New York City, according to A. J. Kerr, vice-president, the Rockwell Manufacturing Co., Pittsburgh, the parent concern.

Colonel Higgins retired from the Army after a distinguished career. Prior to the war he had been associated with the Rockwell organization from 1937 to 1942.

As vice-president of Rockwell International he will maintain his headquarters at 7701 Empire State Building, New York City. He will have responsibilities in the export marketing of products of the various Rockwell divisions and will also be assigned special duties in domestic marketing activities.

Colonel Higgins first joined the U. S. Army in 1915. In 1927 he left the Army to become field promotion man for the American Gas Association. In 1931 he was made secretary of the Natural Gas Department of the A. G. A. He resigned in 1937 to join the Pittsburgh Equitable Meter Division of the Rockwell Manufacturing Company. He re-entered the service in 1942.

As a civilian, Colonel Higgins was widely known as an airplane pilot with well over 5,000 hours of solo flying. He also gained prominence through his assistance to colleges in establishing gas engineering courses, and holds an honorary degree from Texas College of Arts and Industries for his work in that connection.

Gellert to Devote Full Time to Seattle Gas

HENRY GELLERT resigned effective July 31 as president and director of the American States Utilities Corp., as president and director of Southern California Water Co., and also as chairman of the board of directors of the Edison Sault Electric Company. The latter two are subsidiaries of American States.

The board of directors of the American States Utilities Corporation have not picked a successor as president or director. Mr. Gellert announced the election of C. Prugh Harnish, executive vice-president of the Southern California Water Co., as his successor with the title of president and general manager.

The necessity of his full time as president of the Seattle Gas Co. has made this step necessary, Mr. Gellert advised.

Yard Takes Position With Norwalk Firm

W. S. Yard

WILLIS S. YARD, a past-president of the Pacific Coast Gas Association, has assumed responsibility for all West Coast engineering for the Norwalk Valve Company. His headquarters will be at the San Francisco office.

Mr. Yard was for 16 years vice-president of the Pacific Gas and Electric Co., San Francisco, in charge of gas construction and operation. While with the utility he designed and installed the large natural gas lines to the San Francisco and Bay areas and had charge of the conversion of all gas consuming appliances to natural gas.

For many years Mr. Yard was associated with the Seattle Gas Company. He is a member of the American Gas Association and a vice-president of the Gas Consumers Association.

Philadelphia Electric Names General Counsel

V. P. McDevitt

VINCENT P. McDEVITT has been named general counsel in charge of the Legal Department of the Philadelphia Electric Co., succeeding the late Bernard P. Carey.

A native Philadelphian, Mr. McDevitt attended the Wharton School of the University of Pennsylvania before matriculating at Temple University Law School. He was admitted to the Bar in 1928, one year before graduation, after which he engaged in general legal practice.

He was appointed assistant district attorney of Philadelphia in 1935 and in 1945 was named chief counsel of the Pennsylvania Utilities Commission. He served in that capacity until December, 1946, when he resigned to devote full time to his private practice in Philadelphia.

Mr. McDevitt is active in the Philadelphia, Pennsylvania, and American Bar Associations. He is chairman of the committee of meetings and a member of the judiciary committee of the Philadelphia Bar Association and vice-chairman of the interstate compact committee of the Pennsylvania Bar Association.

Joy Accepts Honolulu Gas Company Post

Paul C. Joy

PAUL C. JOY, formerly a chemist and engineer with the Southern California Gas Co., Los Angeles, has joined the staff of the Honolulu Gas Co. and will serve as process development engineer under Harold P. Saueressig, plant superintendent. Mr. Joy's appointment was announced by John J. Winn, Jr., vice-president and general manager of the Honolulu firm.

Mr. Joy will devote his efforts to the company's long-range program of improving gas and its manufacturing processes. Prior to joining the staff of the Honolulu company, he was for a short time with the North American Aviation Co. as a development engineer in fuel studies for guided missiles.

A native of southern California, Mr. Joy received his undergraduate training at the University of California and at Whittier College. Following his graduation from Whittier in 1942, he was awarded a teaching fellowship at the University of Southern

California, where he served as a chemistry instructor in the Navy's officer training program. During this period, he completed work for his master's degree in industrial chemistry, and was elected a member of Phi Lambda Upsilon, honorary chemistry fraternity.

Joining the staff of the Southern California Gas Co. in March 1944, Mr. Joy served as a development chemist. Following completion of his development work, he was transferred to the company's technical department as a process engineer to assist in improvement of production processes.

Bescher Promoted at Interstate Power

F. E. Bescher

THE promotion of F. E. Bescher to business development manager, the Interstate Power Co., Dubuque, Iowa, has been announced by B. F. Pickard, president of the utility. Mr. Bescher succeeds L. L. Perry who resigned effective September 1 to enter the photography business.

Mr. Bescher has been connected with the utility field for the past 27 years, starting in 1920 as assistant to the manager of the Richmond, Ind., Electric Company. In 1927 he became division commercial manager of the Interstate Public Service Co. of Monticello, Ind., in which capacity he remained until 1928.

He then became affiliated with the Interstate Power Co. as assistant general sales manager. In 1933 he was appointed sales supervisor of the Dubuque district, remaining in that position until 1937 when he was advanced to director of lighting, which position he held until his present promotion.

Meyers to Manage Glenwood Plant

G. J. Meyers, Jr.

GEORGE J. MEYERS, JR., has been chosen plant manager of the Glenwood Range Co., according to Malcolm Leach, president.

Mr. Meyers was employed by the General Electric Co. from 1930 to 1945. During the war years he worked in production design and shop engineering on jet propulsion aircraft engines. He also served as liaison engineer, Allison Division of General Motors Corp. on jet engines. Since 1945 he has been assistant works manager with Manning, Maxwell & Moore.

Pennsylvania P & L Employees Cited

G. R. Fernsler receiving McCarter Medal and Certificate from M. S. Lawrence, division manager, as H. W. Renn displays his McCarter Certificate of Assistance. Looking on are J. C. Hilbish, Helen S. Sanders, P. L. G. Hasskarl and D. J. Zimmerman

GEORGE R. FERNSLER, Pennsylvania Power & Light Co. representative, was awarded the American Gas Association's coveted McCarter Medal and Certificate, and Harold W. Renn, company district manager, was awarded the McCarter Certificate of Assistance in formal ceremonies on July 17.

The men were honored for saving the lives of two Sunbury, Pa., residents asphyxiated by gas last December. The presentations were made by M. S. Lawrence, division manager, at a gathering of employees in the utility's Sunbury Division office. Among those present was Helen Sanders, daughter of one of the victims, who first discovered the accident. Miss Sanders is a cashier first class in the Sunbury office.

Citizens Gas & Coke Appoints Ad Director

B. M. Scherer

B. MORGAN SCHERER has been appointed advertising and public relations director of the Citizens Gas & Coke Utility, Indianapolis. Mr. Scherer has been associated with advertising for more than 13 years and assisted in sales promotion at the East Tennessee Light & Power Co., Bristol, from 1931 to 1934.

His advertising background includes two years with the advertising department of L. S. Ayres and Co., and five years with the *Indianapolis Star*. Since 1941 he has been advertising promotion manager of the *Indianapolis News*. He is now faculty lecturer at Indiana University, conducting a course in advertising copywriting.

Seattle Gas Receives Highest Merit Award

THE Highest Merit Award has been issued to the Seattle Gas Co. by the *Financial World* in recognition of the excellence of the utility's 1946 annual report to stockholders.

Only five manufactured gas companies in the United States have been so honored. Last year the Seattle company won the Silver Oscar awarded by the *Financial World* for the finest annual report for the entire public utility industry of the United States including manufactured gas, natural gas, electric and water companies.

The company is one of five candidates for the next highest award—the Oscar of Industry. The other four are The Brooklyn Union Gas Co., The Hartford Gas Co., the Suburban Propane Gas Corp. and the Washington Gas Light Co., of Washington, D. C.

Dobson to Head Florence Stove

E. F. Dobson

EDWARD F. DOBSON has been elected president and director of Florence Stove Co., effective October 1. Robert L. Fowler, formerly president and chairman of the board, will continue in the latter post.

Mr. Dobson comes to Florence from the presidency of Rundle Manufacturing Co., Milwaukee, Wis., and Camden, N. J. He has wide experience in industry and business management, having spent his whole career in manufacturing, where he was closely associated with all phases of factory production and operations.

60-Year Man Leaves American Stove

After 60 years of service with American Stove Co., John J. Metz retires to his easy chair

JOHN J. METZ, holder of the longest record of continuous service with the American Stove Co., and probably one of the longest in the entire country, retired recently after 60 years on the job.

Mr. Metz's first job in 1887 was as a burner assembler in the Quick Meal Division of what later became the American Stove Company. When the firm expanded into larger quarters, his knowledge of stove construction gained him a position in the repair department, and there he served the remainder of his 60-year tenure in charge of the Service and Repair Department, and finally, of the sample floor.

Chapman Offers Services To Gas Industry

H. M. Chapman

FOLLOWING the termination of the Solid Fuels Administration, Harlen M. Chapman, who during 5.5 years with Solid Fuels was in charge of the distribution of metallurgical coal for coke and gas plants unable to obtain their requirements, has offered his services to anyone in the gas industry on a consulting basis.

Mr. Chapman has been engaged in the manufacture and distribution of coke and its by-products in engineering, managerial and sales capacities for 39 years.

His career includes service in various executive and technical capacities with Maryland Steel Co., Sparrows Point, now a part of Bethlehem Steel Corp.; Semet Solvay Co.; the Indiana Coke & Gas Co. and the Vigo Mining Co. at Terre Haute, and the Hudson Valley Fuel Corp., Troy, N. Y., a subsidiary of the Niagara Hudson Power Corporation.

Mr. Chapman is a past member of the American Gas Association. His present address is 30 Winston Drive, Bethesda 14, Maryland.

Engineer Joins Laboratories Staff

MELVIN S. RUBIN, a June graduate of Case Institute of Technology and engineer formerly connected with the government's atom bomb plants, has joined the staff of the American Gas Association Testing Laboratories. He is assigned at present to the testing department in Cleveland.

Entering the Army before graduation, Mr. Rubin was assigned to the Engineering Corps and worked with the Tennessee Eastman Corp. at the Oak Ridge plant on the processing of uranium isotypes. He was associated with the Oak Ridge plant for 20 months following which he was assigned to Army Intelligence at the new Mexico plant where he was employed for four months.

He returned to Case this past year to complete the course in mechanical engineering in which he now holds a degree. While there he also engaged in research activities in air conditioning.

Titus To Help Edit Trade Magazines

EDWARD K. TITUS has been appointed eastern editor of *Gas* and also of *Butane-Propane News*. His headquarters are currently in the New York office of Jenkins Publications, Inc., 52 Vanderbilt Ave., New York 17, N. Y.

Mr. Titus has had considerable editorial experience, having covered industrial features for the *New York World-Telegram* and the *Brooklyn Daily Eagle*. He served in the Air Corps during World War II.

He is a graduate of Phillips-Exeter and Yale, a member of the New York Financial Writers Association and the National Press Club, Washington, D. C.

Williams Promoted By United Light and Railways

GEORGE T. WILLIAMS has been appointed head of the Chemical Engineering Department, The United Light and Railways Service Co., Davenport, Iowa, succeeding the late Olin K. Smith. Mr. Williams has served in the department since March 1, 1925.

Cleveland Appointment

APPOINTMENT of Sterling L. Beck to the sales force of Grand Home Appliance Co., Cleveland, has been announced by S. C. Bernhardt, vice-president. Mr. Beck was formerly production control manager with S. H. Thomson Mfg. Co., Dayton.

Hull Made Reynolds Sales Engineer

Waldo S. Hull

WALDO S. HULL has been appointed eastern representative sales engineer for Reynolds Gas Regulator Co., Anderson, Indiana. Mr. Hull recently resigned as Philadelphia representative for Rockwell Manufacturing Company and has a wide experience in gas flow and control.

A native of upstate New York, he is a graduate chemical engineer from Rensselaer Polytechnic Institute. After three years as metallurgist with Remington Typewriter Co., he moved to Utica Gas and Electric Co. (now Central New York Power Corp.), where he was concerned with all phases of gas engineering, becoming superintendent of gas transmission and regulation. In 1942 Mr. Hull was loaned to W.P.B. where he was senior industrial engineer in the Gas Materials Division, Office of War Utilities, for the duration.

Mary Scranton Receives Middletown Position

MARY ALICE SCRANTON, who joined the Home Service Department of The Cincinnati Gas & Electric Co. as home economist last summer, has taken over the post of home service director of the Middletown Gas & Electric Service.

Miss Scranton's background includes work as home service advisor, Rochester Gas & Electric Corp., dietitian at King's Daughter Hospital, Frankfort, Ky., and instructress in food and nutrition at the University of Kentucky.

Hughes Directs United Light Purchases

Frank H. Hughes

F. H. HUGHES has been named director of purchases of The United Light and Railways Service Co., Chicago, succeeding the late W. H. Fahrner, purchasing agent. Mr. Hughes is widely known in the utility field, having been associated with the North American Light and Power Company and its subsidiaries since April, 1919. Starting as a clerk to the vice-president and general manager, he handled special assignments, pur-

chased all insurance carried by six subsidiary companies.

In September, 1926, Mr. Hughes was appointed director of purchases. From 1930 to 1933 he also purchased all materials used in the construction of a $40 million gas transmission line from Borger, Texas to Minneapolis. He served as a director of the Missouri Power and Light Co. and vice-president of the Central Terminal Co., participating in the management of other subsidiaries.

Harry Smith Starts New Firm

HARRY W. SMITH, JR., formerly director of industrial and commercial publicity, American Gas Association, and more recently manager of technical information, Selas Corporation of America, and vice-president, John Mather Lupton, Inc., has formed a new firm, Harry W. Smith, Inc., 480 Lexington Ave., New York 17, N. Y., specializing in technical publicity. The new organization will work directly with industrial firms, "teaching the technology behind the business."

Duo-Therm Fills Sales Post

E. M. CRARY, former district manager in the southwest, has been appointed assistant sales manager for the Duo-Therm Division of Motor Wheel Corporation. In his new position Mr. Crary assists R. H. Reeder, recently appointed sales manager.

Lawrence F. Neely has assumed the position formerly held by Mr. Crary. Mr. Neely has had extensive experience in the merchandising field, including six years as territory manager at Dallas for the National Cash Register Company.

Tracy to Manage West Coast Division

GROVER S. TRACY has been appointed manager of the San Francisco Division, Pacific Gas and Electric Co., succeeding Norman R. Sutherland, promoted to vice-president in charge of public relations and sales.

Mr. Tracy has served the utility for 41 years and has been assistant manager of the division since 1945. He has been president of the non-profit P. G. & E. Employees Credit Union since its inception in 1936 and is a past president of the Pacific Service Employees Association.

Wailes Dove-Hermiston

THE Wailes Dove-Hermiston Corp. has ceased to do business as a separate subsidiary corporation and is now operating as part of Koppers Co., Inc. Under the title, Wailes Dove-Hermiston Department, the organization is taking over all the protective coatings of the Tar Products Division of Koppers. Personnel and products remain unchanged.

Associated Organization Activities

P. C. G. A. Lists Plans for Annual Meeting

THE Biggest Inch gas pipeline, atom smashing, catalytic synthesis of gas and new sales promotion plans will be features of the fifty-fourth annual meeting of the Pacific Coast Gas Association at the Hotel del Coronado, San Diego, Calif., September 23-25.

The program will open with a manufacturers' meeting followed by an afternoon session featuring addresses by LeRoy M. Edwards, P.C.G.A. president, and R. H. Hargrove, president, American Gas Association. Election of officers will follow.

All sessions will be general sessions this year. The program will include such prominent leaders as: Paul Kayser, president, El Paso Natural Gas Co.; Alden G. Roach, president, Consolidated Steel Co.; Harold P. Huls, California Public Utilities Commission; Dr. Lee A. Du Bridge, president, California Institute of Technology; Harold Costello, l.p.g. marketing specialist, Standard Oil Co. of California.

Other prominent participants will include: D. A. Hulcy, president, Lone Star Gas Co., Dallas; Frank H. Lerch, Jr., president, Consolidated Natural Gas Co.; Captain E. S. Pettyjohn, director, Institute of Gas Technology; Guy W. Wadsworth, Jr., vice-president, Southern California Gas Co.; Elizabeth Sweeney, *McCall's* Magazine; John A. Robertshaw, president, Robertshaw Thermostat Co.; H. Carl Wolf, managing director, A. G. A., and H. Leigh Whitelaw, managing director, Gas Appliance Manufacturers Association.

New Jersey Association Plans Annual Meeting

THE New Jersey Gas Association will hold its thirty-second annual meeting at the Stacy-Trent Hotel in Trenton, N. J., September 23. This will be the first annual meeting since 1940 to which the association's entire membership has been invited.

Preston D. Gardner, president of the association, will deliver a welcoming address and trace the group's activities during the year. Col. Hudson W. Reed, first vice-president, American Gas Association, will also greet the members. Dr. Ralph L. Lee, Public Relations Department, General Motors Corp., Detroit, will deliver the main address, "Leadership and What It Takes."

Other speakers on the tentative program will include John W. West, Jr., A. G. A. assistant managing director, "The Gas Industry Looks to the Future"; Dr. James Lee Ellenwood, executive secretary, New York State Y. M. C. A., "Serving The Public—Its Obligation and Reward"; Henry R. Flanegan, assistant to manager, Customer Service Department, Philadelphia Electric Co., "We All Meet the Customer"; Robert E. Ginna, vice-president, Rochester Gas and Electric Corp., "What To Do About House Heating"; Bernard A. Seiple, president, Jersey Central Appliance Co., "Deal in the Dealer."

Michigan Gas Group Elects Arthur

M. W. Arthur

M. W. ARTHUR, vice-president and assistant general manager, Consumers Power Co., Jackson, Mich., was elected president of the Michigan Gas Association at a two-day joint conference with the Michigan Electric Light Association at Grand Hotel, Mackinac Island, July 7-8. T. W. Weigele, gas engineer for the Detroit District of Michigan Consolidated Gas Co., was named vice-president, and A. G. Schroeder, assistant general manager of the same utility at Grand Rapids, was re-elected secretary-treasurer.

On the first day the delegates met jointly with those of the electric association with the introductory address by the Honorable Prentiss M. Brown, former United States Senator from Michigan and now chairman of The Detroit Edison Company. The main address was by President J. W. Parker of The Detroit Edison Company who discussed the atomic power problem. American Gas Association President R. H. Hargrove, who was scheduled to appear on the program, was represented by George H. Smith, A. G. A. assistant managing director, who presented a comprehensive picture of the A. G. A. sales, advertising, and promotional program.

On the second day the gas men were addressed by retiring President Henry Fink, president of Michigan Consolidated Gas Company. The program was highlighted by reports on the fellowship research work being conducted by the association at the University of Michigan and included reports by Chairman J. E. Spindle of the Technical and Fellowship Committee and Professor R. R. White who is directly in charge of the work. Professor emeritus Alfred H. White who inaugurated this work in 1900 briefly commented on the past record of the association in research. H. Vinton Potter, A. G. A., presented an illuminating talk on the New Freedom Gas Kitchen and laundry promotion program.

N. E. G. A. Schedules September Meetings

A MEETING of the Sales Division of the New England Gas Association at the Hotel Bradford, Boston, on September 11, is the first of five events which the association has planned for September.

The Company Managers' Conference is scheduled for the Copley Plaza Hotel, Boston, on September 24. On September 26, the Home Service Group will meet at the Hotel Kenmore, Boston, in the morning, and in the afternoon the Home Service and Manufacturers Division will hold a joint luncheon and meeting at that hotel. The same day the Industrial Division will meet at the Woodland Country Club in Newton.

P. C. G. A. Man Retires

CARL A. SWIGART, widely-known in the gas industry in the far west during his 15 years with the Pacific Coast Gas Association, entered retirement July 1. As trade relations representative for the association he was closely identified with the gas appliance manufacturers section of the industry and also played an active part in the arrangement of annual conventions.

Prior to joining the gas industry Mr. Swigart was active in a number of business fields including manufacturing, public utilities and newspapers. Born in Ohio he migrated to Wisconsin, then to California, and finally to Oregon where in 1922 he became comptroller of the California-Oregon Power Company. He left the utility in 1929 to enter the newspaper field, founding the *Daily News* in Medford, Oregon. Later he sold out his interest in the paper to enter P. C. G. A.

J. E. Kern has replaced Mr. Swigart as assistant manager of the Pacific Coast Gas Association.

California Meter Group Selects New Officers

CURTIS CORTELYOU, General Petroleum Corp., has been elected president of the Southern California Meter Association. Other new officers are: vice-president, J. C. Groenewegen, Shell Chemical Corp.; secretary-treasurer, George H. Forster, Jr., The Texas Co.; auditor, J. Andrew Waltman, Southern California Gas Co., Los Angeles.

Lee Cheever, Southern Counties Gas Co., Los Angeles, past-president of the Association, announced that the annual meeting was held July 17 at the Rio Hondo Country Club.

S. G. A. Manual Issued

THE Southern Gas Association's new sales manual for dealer and utility gas appliance salesmen, "Selling Gas Appliances," is available for delivery.

The manual is modern, up-to-date and contains 150 pages packed with vital information. Fundamental sales principles are set forth and special attention is directed to the customer appeal of quality gas ranges, gas water heaters, gas refrigerators and gas house heating. The price to S.G.A. members is $1.00 a copy.

Mid-West Gas School Program Announced

PLANS are set for the twenty-fourth Mid-West Gas School and Conference at Iowa State College, Ames, Iowa, September 8-9.

Conducted by the Mid-West Gas Association and the Engineering Extension Service of Iowa State College, the conference will be built around general and sectional meetings. The latter will include Distribution Section, Utilization Section, Production Section and the Meters and Metering Section. The call to order on September 8 will be given by Arnold C. Rathkey, general chairman, first vice-president, Mid-West Gas Association.

Ebasco Completes Safety Program

Forming agenda for Ebasco's annual Safety Meeting were: left to right, C. L. Hightower, Shreveport, La.; O. P. Jones, Wichita, Kan.; W. T. Rogers, New York, committee chairman, and W. C. Lounsbury, Duluth, Minnesota. W. H. Senyard, New Orleans and O. S. Hockaday, Texas, were unable to attend but are helping to develop the program

THE program for the annual Ebasco Safety Meeting in Chicago, October 6-8 was completed in New York, July 14-16 by a committee of safety directors from client companies throughout the United States. Topics selected include safety and job training, aptitude and psychological tests for selection of safe workers, safety problems in construction and fire protection.

The meetings have been held annually since 1938 in conjunction with the National Safety Congress for the benefit of safety directors and executives concerned with safety and related matters in client utility companies of Ebasco in 30 states. One feature will be a round-table discussion of ideas, new developments and devices for protecting the worker from accident and health hazards. W. T. Rogers, safety consultant, Ebasco Services, Inc., New York, is chairman of the program committee.

Obituary

George A. Ranney

GEORGE A. RANNEY, chairman of the board, The Peoples Gas Light & Coke Co., Chicago, died August 15 in Hot Springs, Virginia.

Mr. Ranney was elected vice-chairman of the boards of Commonwealth Edison Co., The Peoples Gas Light & Coke Co., and the Public Service Co. of Illinois in March 1933. Two years later he was named chairman of the board of Peoples Gas when that management was divorced from Commonwealth Edison.

A native of Chicago, Mr. Ranney has served with the International Harvester Co. since 1902. He became secretary in 1913, secretary-treasurer in 1916, vice-president and treasurer in 1922 and vice-president in charge of sales in 1932.

He retained his association with International Harvester as a member of the executive committee and a director, and he was also on the executive committee of the First National Bank, Chicago; an official of the Westinghouse Electric and Manufacturing Co., and the Westinghouse Electric International Co. He was a director of the New York Central System.

He served as trustee of the Museum of Science and Industry, Chicago, the University of Chicago, and was a member of numerous clubs.

Surviving are his wife, Mrs. Cornelia Williams Ranney; two daughters, Mrs. Gaylord Donnelly and Mrs. Wyndham Hasler, and a son, George A. Ranney.

LUTHER R. NASH, engineer and public utilities rate expert and author, died August 10 in the Danbury, Conn., Hospital.

Mr. Nash became associated with the Boston branch of the Stone and Webster Engineering Corp. in 1895. He was a design and

construction engineer until 1904, a manager of public utilities the next four years, and an appraisal engineer and rate expert until 1919.

The same year he became consultant on regulation, rates, taxation, depreciation and public relations, and in 1932 he was made a vice-president of the company in charge of appraisals and rate investigations.

He was also author of "Economics of Public Utilities," "Public Utility Rate Structures" and "The Anatomy of Depreciation." He was a member of the American Gas Association for 12 years and at one time was a member of the former Rate Fundamentals Committee. Mr. Nash retired in 1938.

A widower, he leaves two nephews and three nieces.

B. P. Carey

BERNARD P. CAREY, former vice-president—general counsel of the Philadelphia Electric Co., died recently following a long illness. He was 53 years old.

Mr. Carey entered the employ of the company in 1913. In 1924, he was named attorney for the company, and in 1928 counsel. He continued in that position until 1939, when he was appointed general counsel. In 1943, he was elected vice-president.

Mr. Carey was a graduate of Temple University Law School. He was a member among others of the American Bar Association, the Pennsylvania Bar Association, the Philadelphia Bar Association, the American Gas Association, Edison Electric Institute, and a past-president of the Pennsylvania Electric Association.

Surviving are his wife and four children.

JOHN H. EMERY, vice-president, Roberts & Mander Corp., Hatboro, Pa., died August 24 in Orange Memorial Hospital, Orange, N. J.

Mr. Emery graduated from the University of Michigan in 1919 and joined the Sullivan Machinery Co. as eastern sales manager. He served with the Gale Engineering Co. in 1939 and joined the Roberts & Mander Corp. in 1945 as district manager of the New York office. He assumed the post of vice-president last February. Mr. Emery was a member of the American Gas Association.

Surviving are his wife, Mrs. Mary Elizabeth Emery; a daughter, Miss Elizabeth Anne Emery; a son, John H. Emery, Jr.; his father, Dr. Charles H. Emery; a brother, Dr. Charles H. Emery Jr., and two sisters, Mrs. Mary Alice Rowe and Miss Florence Emery.

JAMES A. RICHIE, vice-president and secretary-treasurer, Republic Light, Heat & Power Co., Buffalo, and secretary-treasurer, The Dominion Natural Gas Co., Ltd., Brantford, Ont., died August 19.

Mr. Richie had been associated with the public utility division of Cities Service Co. since 1906, having served formerly at Denver, Colo., and Spokane, Washington. He moved to Buffalo in 1914 as secretary-treasurer of Republic & Dominion Companies, and was elected vice-president of Republic in 1942.

He had served as a member of the American Gas Association, the Canadian Gas Association, the United States Chamber of Commerce, the Buffalo Chamber of Commerce, and as director and treasurer, the Natural Gas & Petroleum Association of Canada.

INDUSTRY PREPARES FOR CONVENTION

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address the Natural Gas Department meeting later in the day on the manifold activities of his division. Conservation of natural resources is expected to be a major point in his presentation.

As spokesman for the great manufacturing industry, D. P. O'Keefe, president, Gas Appliance Manufacturers Association, will enlighten general sessions listeners regarding the trends and prospects in gas appliance developments. Speaking on the topic, "The Responsibilities of Increased Production," Mr. O'Keefe will spotlight the material situation and plans for increased production.

The presentation of awards for outstanding individual achievements will round out this second session. These include the A. G. A. Distinguished Service Award (formerly the Charles A. Munroe Award), the A. G. A. Meritorious Service Award, A. G. A. Gas Heating Progress Award, the Beal Medal and the A. G. A. Home Service Achievement Award.

The final general session, Wednesday morning, will open with the keynote speech, "Gas Has Got It," by J. J. Quinn, vice-president, Boston Consolidated Gas Company. Mr. Quinn, chairman of the A. G. A. National Advertising Copy Committee, will tell the delegates features of the unprecedented promotional program to be carried out this year.

The prospective rise of a brand new industry, based upon coal as a chemical raw material, will be the subject of the next program highlight. An executive of a multi-million-dollar enterprise which promises an exciting future for the sick coal industry, and for the gas industry, is expected to paint a stimulating canvass of things to come.

Industry-wide cooperation with special sidelights on the house heating situation, will be the intriguing topic of Frank H. Adams, president, Surface Combustion Corp., Toledo. His talk will contain the fruits of considerable time and effort spent in ferreting out the most advantageous course for the gas industry.

A leading banker's analysis of investment opportunities in the gas business as viewed by the public generally, will also be presented at this session. This will include a composite picture of what the average investor thinks of gas utility securities and what can be done to maintain faith in the future.

The impressive up-to-date results of the comprehensive gas industry Promotion and Research Plan will be outlined as a fitting climax to the convention. The "Gas Has Got It" program is only one of the many promotional facets of this far-sighted plan which calls for research and advertising on a scale new to this industry.

A wide variety of informative and interesting material will be presented at the various departmental and sectional meetings arranged as follows: Monday afternoon, October 6—Residential Gas Section, Technical Section, Motor Vehicle Committee, and Accounting Section; Tuesday afternoon, October 7—Natural Gas Department, Industrial and Commercial Gas Section, combined Manufactured Gas Department and Technical Section, and Accounting Section; Wednesday afternoon, October 8—Accounting Section, Technical Section, and Motor Vehicle Committee.

Under the sponsorship of the Home Service Committee, Mrs. Mary Belle Burnett, chairman, the popular Home Service Breakfast will be held again this year. It will take place Tuesday morning at the Hotel Hollanden and will include a special surprise program feature. At 2:00 o'clock that afternoon a Home Service Round-table will be held at the Hotel Statler. Subjects for discussion include: "Home Service and Dealer Cooperation," "Laundry Promotion," and "School Contacts."

The traditional President's Reception and Dance, with entertainment features, has been arranged for Monday night, October 6.

CERTIFICATION

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society, or other organization of national scope." If no such standards are available then the standards that are used must be developed through the participation of competent consumer, producer and general interest groups. Approval of a standard by the American Standards Association is recognized as *prima facie* evidence that it complies with these requirements.

The standards upon which the certification of a product rests must be available either without cost or at a reasonable charge.

To be accepted as valid any certification program, including the sampling of the product and the examination on which the certification is based, must be re-examined at appropriate intervals.

Only qualified trade association testing laboratories, professional societies, or other nationally recognized organizations are to be recognized as being properly responsible for valid certification programs. The testing or inspection agency itself must be independent of any of the groups directly concerned with the product and must be competent in the field.

The labels or tags carrying the certification statement must identify the certifying agency and the standard or standards on which the certification is based, and must state in what particulars the product conforms with the standard.

In case of disagreements, the standard practice provides that the question shall be taken to a referee who must be acceptable to the certification agency, to the testing agency and to the party raising the question.

Although these principles already underlie some of the certification programs now in operation, no one can foresee all the problems that may arise in putting them into effect generally.

As a result of the completion of the American Standard Practice for valid certification, through the deliberations of Sectional Committee Z34, there is now available a standard for certification procedures "to which the wise and honest can repair." Any organization engaged in providing public guidance as to the qualities of goods and services may check its procedure against the elements of a valid certification set forth in this standard. In any case where the procedure of such an organization does not agree with the standard, that organization will do well to re-examine its practice. All concerned can feel sure that any certification procedure that is definitely out of alignment with the standard is not to be relied upon for public assurance.

It is hoped that this standard will be influential in regularizing many of the existing certification procedures that may not at present be in line with it. It remains for future decision what part, if any, the American Standards Association will take in promoting adherence to the principles here laid down. Meanwhile, all who are intent upon affording reliable guidance to buyers may appropriately join in advocating adherence to the principles of this standard.

SERVICES OFFERED

A man with large acquaintance and years of successful **Engineering Sales Experience** in gas field desires connection with well established company. If you have a sales problem I would like to talk it over with you. **1547.**

Gas Engineer—Young, available immediately, two years' experience in c.w. gas manufacture. One as cadet; large metropolitan gas company. One as Supt. of Manufacture in overseas gas plant of large American Corp. Also two years' distribution experience. Graduate, Licensed Engineer; speak some Spanish. Single, veteran, best references. Excellent health. **1548.**

Gas Engineer with Mechanical Engineering degree and Professional Engineering License. 10 years' experience consisting of research and testing work at the A. G. A. Laboratories, consulting work and the design, development and production of gas heating equipment. **1553.**

Successful **Consultant,** 17 years' experience in developing and stabilizing Net Revenues for Gas and Electric operations. Three and one half years field service Army Engineers. Having traveled continuously wishes permanent position and fixed base with progressive utility. Can get things done. **1549.**

Salesman—Several years of experience selling heating and cooking appliances of every description in various territories. Ability and experience to operate a stove department, direct the efforts of a selling organization promoter of specialties, etc. No preference as to territories; will travel anywhere. Only interested in a lucrative arrangement. **1550.**

Labor Relations Man. Practical, engineering and legal backgrounds. 18 years diversified experience, manual labor, engineering, management, personnel, labor relations large nationally known manufacturer. B.S., M.E., LL.B. degrees. Licensed professional engineer New York and Ontario. Member N. Y. Bar. Commander USNR. Considerable success in dealing with labor groups. (37) **1551.**

Gas Engineer—Graduate M.E. Public Service Commission Experience, Gas Utilities, Engineering Surveys and Reports, Reports on Contracts, Professional Engineering License Pending. (28) **1552.**

POSITIONS OPEN

Accountant who has had experience with small Utility company. Able to keep general books, customer's accounting records and supervise office force for small gas utility and affiliated bottle gas and appliance company. Location New York and New Jersey. **0508**

General Superintendent to supervise over all operation of combination coal and water gas plant and distribution department. Experienced in handling personnel. Plant located in North Carolina with approximately 300 million per year. **0497.**

Product Development Engineer, must be familiar with all types of gas appliances. Have experience to take charge of development, experimental design and test work on valves and controls for gas appliances. Good chance for advancement with well-established valve manufacturer. Write, giving experience in detail and salary expected. **0498.**

Manager-Superintendent for three small neighboring Eastern networks totalling 5000 meters water gas and LP-gases including potential bottled gas fringe system. **0499.**

Accounting Methods Specialist who has had a broad, successful experience in utility general accounting methods and procedures. Must have ability to sell himself to others. Knowledge of accounting machine operation and applications essential. College or accounting school graduate. Good future opportunity for right man. Some travelling. Give complete information including salary expected. **0500.**

Assistant Superintendent Water Gas Plant making Synthesis Gas in thirteen 11 foot U.G.I. units. Experienced man with a technical educational background desired, salary commensurate with ability and experience, large Chemical Plant located in northern West Virginia. **0501.**

Water Heater Engineer—For responsible position with major manufacturer. Must have thorough technical background covering design, development, and manufacturing procedures. Outstanding opportunity and commensurate salary. **0502.**

Chemical Engineer or **Chemist** to make and supervise analyses in carburetted water gas plant and to improve efficiencies of operations and facilities. **0503.**

Engineer—design and test gas-fired residential heating appliances. Must have engineering degree and at least 5 years' experience in design and test of such appliances. Permanent position with excellent future with well-known manufacturer located in metropolitan N. Y. Give particulars of experience in full detail, and salary requirements. **0504.**

Gas Appliance Engineer—Should be familiar with the development and testing of gas-fired heating equipment. Good opportunity with progressive West Coast manufacturer. Give complete information on experience and salary expected. **0505.**

Plant Superintendent—One capable of taking full responsibility—water gas using coke and heavy oil. Eastern utility with send-out 475,000 M.C.F. annually. **0506.**

Superintendent for small gas property with water gas plant. Eventually propose to change to natural gas or propane-air gas and establish an affiliated bottle gas business. Excellent opportunity for someone. Location New Jersey. **0507.**

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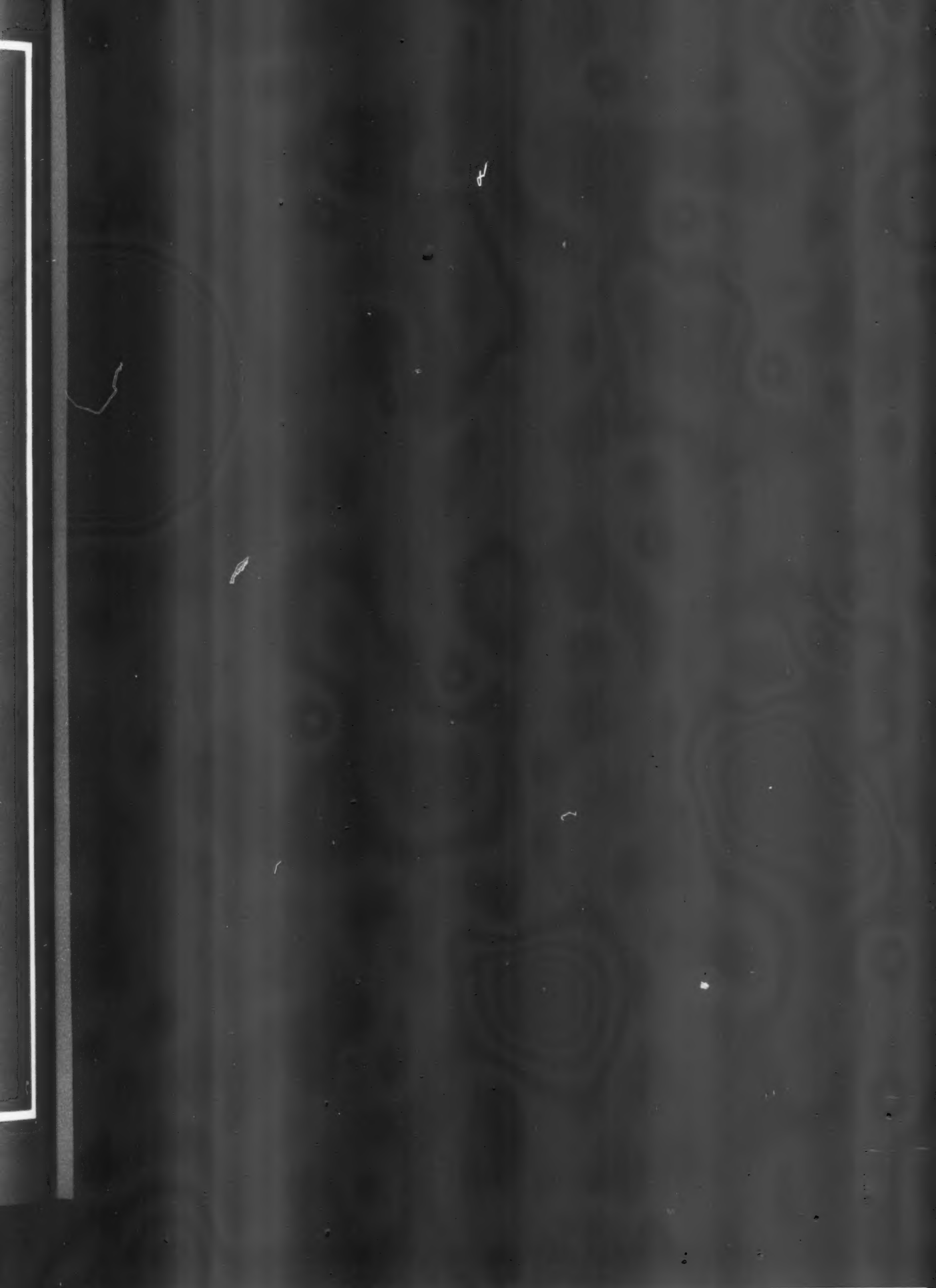
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